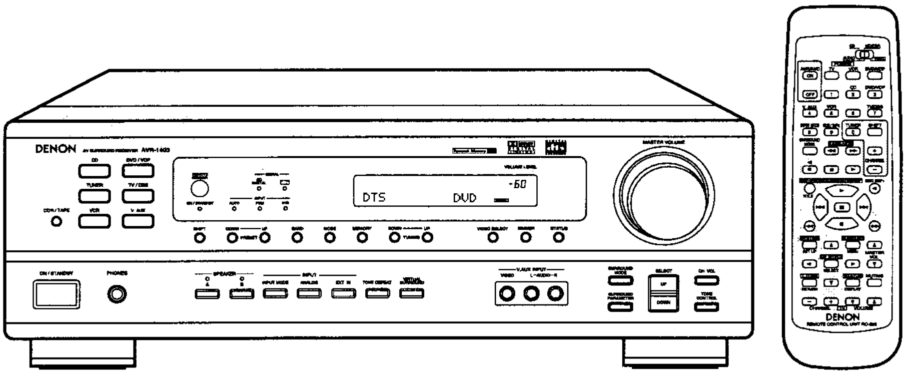
DENON

For U.S.A., Canada ,
Europe & China model

SERVICE MANUAL

MODEL AVR-1403

AV SURROUND RECEIVER



This service manual is composed of only pages whose contents are different from those for the model AVR-1602. For servicing, refer to the previously issued service manual of AVR-1602 (X0116) at the same time.

Some illustrations using in this service manual are slightly different from the actual set.

DENON,Ltd.

16-11, YUSHIMA 3-CHOME, BUNKYOU-KU, TOKYO 113-0034 JAPAN
Telephone: 03 (3837) 5321

X0148 NC 0206

SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

SPECIFICATIONS

■Audio Section

Power Amplifier

Rated output: Front: 60W+60W(8Ω/ohms, 20Hz~20kHz with 0.08% T.H.D) (Europe & China Models)
70W+70W(8Ω/ohms, 20Hz~20kHz with 0.08% T.H.D) (U.S.A. & Canada Models)
90W+90W(6Ω/ohms, 1kHz with 0.7% T.H.D) (Europe Model)
100W+100W(6Ω/ohms, 1kHz with 0.7% T.H.D) (U.S.A. & Canada Models)
100W+100W(6Ω/ohms, EIAJ) (China Model)
Center: 60W(8Ω/ohms, 20Hz~20kHz with 0.08% T.H.D) (Europe & China Models)
70W(8Ω/ohms, 20Hz~20kHz with 0.08% T.H.D) (U.S.A. & Canada Models)
90W(6Ω/ohms, 1kHz with 0.7% T.H.D) (Europe Model)
100W(6Ω/ohms, 1kHz with 0.7% T.H.D) (U.S.A. & Canada Models)
100W(6Ω/ohms, EIAJ) (China Model)
Surround: 60W+60W(8Ω/ohms, 20Hz~20kHz with 0.08% T.H.D) (Europe & China Models)
70W+70W(8Ω/ohms, 20Hz~20kHz with 0.08% T.H.D) (U.S.A. & Canada Models)
90W+90W(6Ω/ohms, 1kHz with 0.7% T.H.D) (Europe Model)
100W+100W(6Ω/ohms, 1kHz with 0.7% T.H.D) (U.S.A. & Canada Models)
100W+100W(6Ω/ohms, EIAJ) (China Model)

Output terminals: Front: A or B 6 to 16Ω/ohms
A+B 12 to 16Ω/ohms
Center/Surround: 6 to 16Ω/ohms

Analog
Input sensitivity/input impedance: 200mV/47kΩ./kohms
Frequency response: 10Hz~100kHz: +1, -3dB (TONE DEFEAT ON)
S/N ratio: 98dB (IHF-A weighted) (TONE DEFEAT ON)

Standard video jacks
Input/output level and impedance : 1Vp-p,75Ω/ohms
Frequency response: 5Hz~10MHz . +1, -3dB

■Tuner section

Receiving range:	[FM] (note: μV at 75Ω/ohms, 0dBf =1x10^{-15}W)	[AM]
U.S.A., Canada Models:	87.50MHz~107.90MHz	520kHz~1710kHz
Europe & China Models:	87.50MHz~108.00MHz	522kHz~1611kHz
Usable sensitivity:	1.0μV (11.2dBf)	18μV
50 dB quieting sensitivity:	MONO 1.6μV (15.3dBf) STEREO 23μV (38.5dBf)	
S/N ratio:	MONO 80dB (IHF-A weighted) STEREO 75dB (IHF-A weighted)	
Total harmonic distortion:	MONO 0.15% (1kHz) STEREO 0.3% (1kHz)	

■General

Power supply:
U.S.A., Canada Models AC120V,60Hz
Europe Model AC230V,50Hz
China Model AC220V,50Hz
Power consumption: 3.7A (USA & Canada model), 200W (Europe & China model)
Maximum external dimensions: 434 (W) x 147 (H) x 417 (D) mm (17-3/32" x 5-25/32" x 16-7/16")
Mass: 9.8kg (20 lbs 9.7 oz)

■Remote control unit (RC-896)

Batteries: R6P/AA Type (two batteries)
External dimensions: 54 (W) x172.5 (H) x 29 (D) mm (2-1/8" x 6-51/64" x 1-9/64")
Mass: 120g (Approx. 4.2 oz) (including batteries)

* For purposes of improvement, specifications and design are subject to change without notice.

PARTS LIST OF P.W.B. UNIT ASS'Y

MAIN P.W.B. ASS'Y

	Ref. No.	Part No.	Part name	Remarks
RESISTORS GROUP				
	R104C	963 9005 451	Metal film 5.6 kohm 1W	
	R104FL,104FR	963 9005 451	Metal film 5.6 kohm 1W	
	R104SL,104SR	963 9005 451	Metal film 5.6 kohm 1W	
	R105C	963 9005 451	Metal film 5.6 kohm 1W	
	R105FL,105FR	963 9005 451	Metal film 5.6 kohm 1W	
	R105SL,105SR	963 9005 451	Metal film 5.6 kohm 1W	
	R106C	963 9005 464	Metal film 4.7 ohm 1W	
	R106FL,106FR	963 9005 464	Metal film 4.7 ohm 1W	
	R106SL,106SR	963 9005 464	Metal film 4.7 ohm 1W	
	R107C	963 9005 464	Metal film 4.7 ohm 1W	
	R107FL,107FR	963 9005 464	Metal film 4.7 ohm 1W	
	R107SL,107SR	963 9005 464	Metal film 4.7 ohm 1W	
	R108C	963 9005 477	Metal film 0.22 ohm 1W	
	R108FL,108FR	963 9005 477	Metal film 0.22 ohm 1W	
	R108SL,108SR	963 9005 477	Metal film 0.22 ohm 1W	
	R109C	963 9005 477	Metal film 0.22 ohm 1W	
	R109FL,109FR	963 9005 477	Metal film 0.22 ohm 1W	
	R109SL,109SR	963 9005 477	Metal film 0.22 ohm 1W	
	R110C	963 9005 477	Metal film 0.22 ohm 1W	
	R110FL,110FR	963 9005 477	Metal film 0.22 ohm 1W	
	R110SL,110SR	963 9005 477	Metal film 0.22 ohm 1W	
	R111C	963 9005 477	Metal film 0.22 ohm 1W	
	R111FL,111FR	963 9005 477	Metal film 0.22 ohm 1W	
	R111SL,111SR	963 9005 477	Metal film 0.22 ohm 1W	
	R118C	963 9005 480	Metal oxide 10 ohm 1W(NB)	
	R118FL,118FR	963 9005 480	Metal oxide 10 ohm 1W(NB)	
	R118SL,118SR	963 9005 480	Metal oxide 10 ohm 1W(NB)	
	R119C	963 9005 480	Metal oxide 10 ohm 1W(NB)	
	R119FL,119FR	963 9005 480	Metal oxide 10 ohm 1W(NB)	
	R119SL,119SR	963 9005 480	Metal oxide 10 ohm 1W(NB)	
	R141,142	963 9005 477	Metal film 0.22 ohm 1W	
	R148,149	963 9005 477	Metal film 0.22 ohm 1W	
	R151	963 9005 493	Metal film 68 ohm 1/4W	
	R154	963 9005 503	Metal film 2.2 Mohm 1/2W	for E3,EU
	R181	963 9005 516	Metal film 4.7 ohm 1W	
	R184	963 9005 529	Metal oxide 10 ohm 1W(NB)	
	R185	963 9005 532	Metal film 1 ohm 1/4W	
OTHER PARTS GROUP				
	JK101	960 0216 208	4P Terminal	LOCK TYPE
	JK102	963 0093 802	6P Terminal	BINDING TYPE
	JK103	960 0216 208	4P Terminal	LOCK TYPE
⚠	JK104	963 0093 909	AC Outlet	for E3,EU

Note :The symbols in the column "Remarks" indicate the following destinations.

E3 :U.S.A. & Canada model

EU :U.S.A. model (AVR-483)

E2 :Europe model

E1C :China model (AVR1403,AVR483)

CPU P.W.B. ASS'Y

Ref. No.	Part No.	Part name	Remarks
SEMICONDUCTORS GROUP			
IC231	963 0093 608	IC M62446AFP	
RESISTORS GROUP			
R231,232	963 9005 600	Metal film 100 ohm 1W	
R271	963 9005 613	Metal film 220 ohm 1W	
R274	963 9005 613	Metal film 220 ohm 1W	
OTHER PARTS GROUP			
JK301	963 0084 206	3P pin jack	Gold

Note :The symbols in the column "Remarks" indicate the following destinations.

E3 :U.S.A. & Canada model
EU :U.S.A. model (AVR-483)
E2 :Europe model
E1C :China model (AVR1403,AVR483)

CNT P.W.B. ASS'Y

Ref. No.	Part No.	Part name	Remarks
RESISTORS GROUP			
R405	963 9005 545	Metal film 100 ohm 1/4W	
R413	963 9005 558	Metal film 220 ohm 1/4W	
R416	963 9005 561	Metal film 680 ohm 1/4W	
R430	963 9005 545	Metal film 100 ohm 1/4W	
R434	963 9005 545	Metal film 100 ohm 1/4W	
R901,902	963 9005 574	Metal film 470 ohm 2W	
OTHER PARTS GROUP			
CP651	–	–	–
JK901	960 0176 306	Headphone jack	Gold

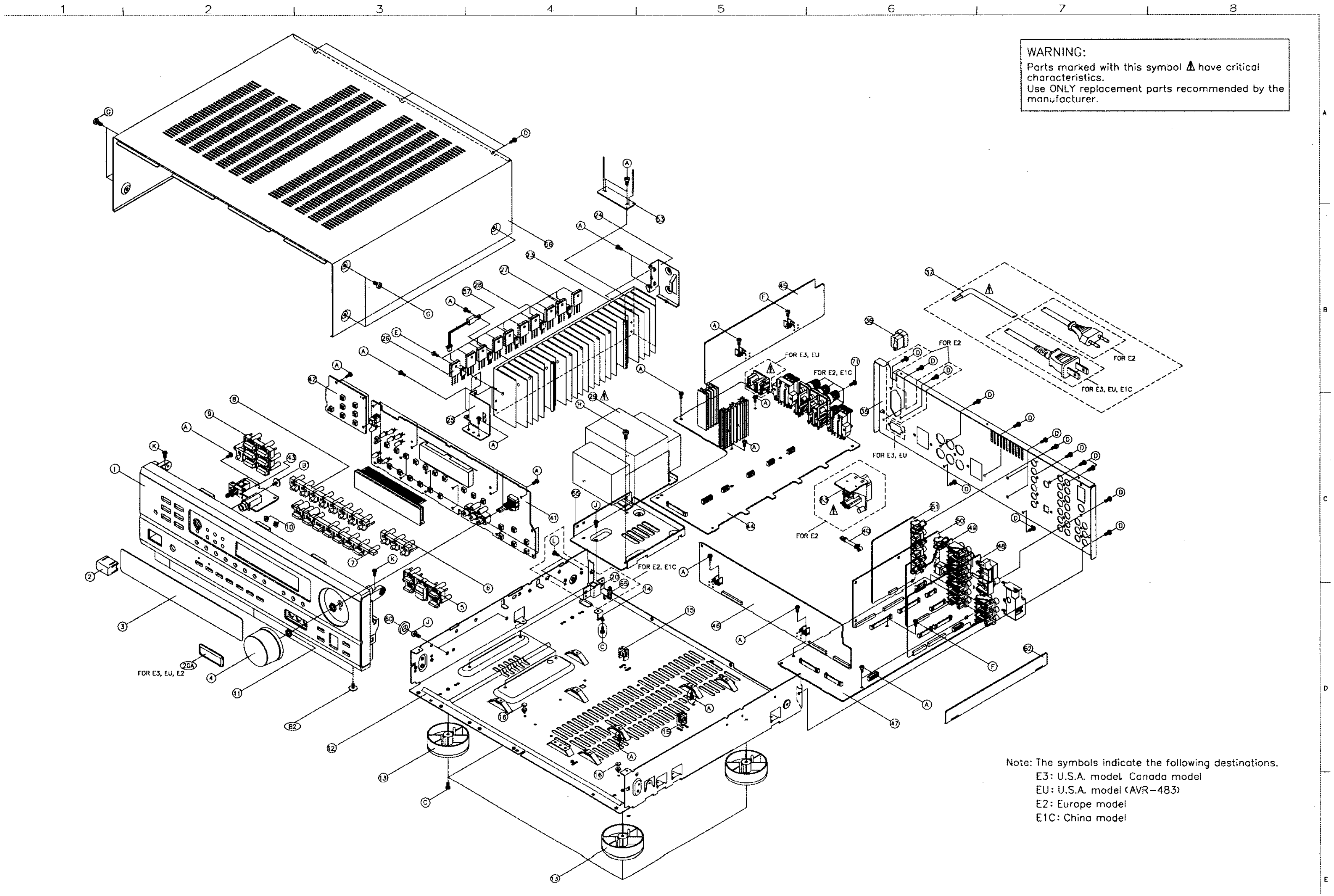
PRE-AMP P.W.B. ASS'Y

Ref. No.	Part No.	Part name	Remarks
RESISTORS GROUP			
R509C	963 9005 587	Metal film 1.2 kohm 1/4W	
R509FL,509FR	963 9005 587	Metal film 1.2 kohm 1/4W	
R509SL,509SR	963 9005 587	Metal film 1.2 kohm 1/4W	
R511C	963 9005 590	Metal film 47 ohm 1/4W	
R511FL,511FR	963 9005 590	Metal film 47 ohm 1/4W	
R511SL,511SR	963 9005 590	Metal film 47 ohm 1/4W	

DSP P.W.B. ASS'Y

Ref. No.	Part No.	Part name	Remarks
SEMICONDUCTORS GROUP			
IC817	–	–	
RESISTORS GROUP			
R803	–	–	
CAPACITORS GROUP			
C812	–	–	
C813	–	–	
C814	–	–	
OTHER PARTS GROUP			
L806	–	–	

EXPLODED VIEW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A
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D
E
FOR E3, EU
FOR E2, E1C
FOR E2
FOR E2
FOR E3, EU, E1C
FOR E3, EU
FOR E2
FOR E2, E1C
FOR E3, EU, E2
20A

WARNING:
Parts marked with this symbol ⚠ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

Note: The symbols indicate the following destinations.
E3: U.S.A. model, Canada model
EU: U.S.A. model (AVR-483)
E2: Europe model
E1C: China model

PARTS LIST OF EXPLODED VIEW

Note :The symbols in the column "Remarks" indicate the following destinations.

E3 :U.S.A. & Canada model

EU :U.S.A. model (AVR-483)

E2 :Europe model

E1C :China model (AVR1403,AVR483)

Ref. No.	Part No.	Part Name	Remarks	Q'ty
41F	963 0073 152	CPU P.W.B. Ass'y	for E3,EU	1
41F	963 0073 165	CPU P.W.B. Ass'y	for E2	1
41		Front P.W.B.		
47		CPU P.W.B.		
53		Video CNT P.W.B.	for E3,EU,	
63		Outlet P.W.B.	for E2	
44F	963 0073 055	Main P.W.B. Ass'y	for E3,EU	1
44F	963 0073 068	Main P.W.B. Ass'y	for E2	1
44		Main P.W.B.		
49		Input P.W.B.		
62		Front CNT P.W.B.		
50F	963 0073 453	DSP P.W.B. Ass'y	for E3,EU	1
50F				
50		DSP P.W.B.		
1	963 0093 705	Front panel	for E3	1
1	963 0093 718	Front panel	for EU	1
1	963 0093 721	Front panel	for E2	1
1	963 0093 734	Front panel	for 1403E1C	1
1	963 0093 747	Front panel	for 483E1C	1
35	963 0095 509	Back chassis	for E3	1
35	963 0095 512	Back chassis	for EU	1
35	963 0095 525	Back chassis	for E2	1
35	963 0095 538	Back chassis	for 1403E1C	1
35	963 0095 541	Back chassis	for 483E1C	1
71	960 0093 104	Terminal bushing	for E2,E1C	6
SCREWS				
D	960 0108 714	Screw 3x10 CBTS(B) DOT-B	for E3,EU	28
D	960 0108 714	Screw 3x10 CBTS(B) DOT-B	for E2	28
D	960 0108 714	Screw 3x10 CBTS(B) DOT-B	for E1C	26

PARTS LIST OF PACKING AND ACCESSORIES

Ref. No.	Part No.	Part name	Remarks	Q'ty
2	963 0072 849	Instruction manual	for E3,EU	1
2	963 0072 852	Instruction manual	for E2	1
2	963 0072 865	Instruction manual	for E1C	1
8	963 0072 962	Carton case	for E3,E2, 1403E1C	1
8	963 0072 975	Carton case	for EU,483E1C	1
10	–	UPC label	for E3	1
10	–	UPC label	for EU	1
10	–	POS label	for E2	1

DENO-00393

DENON

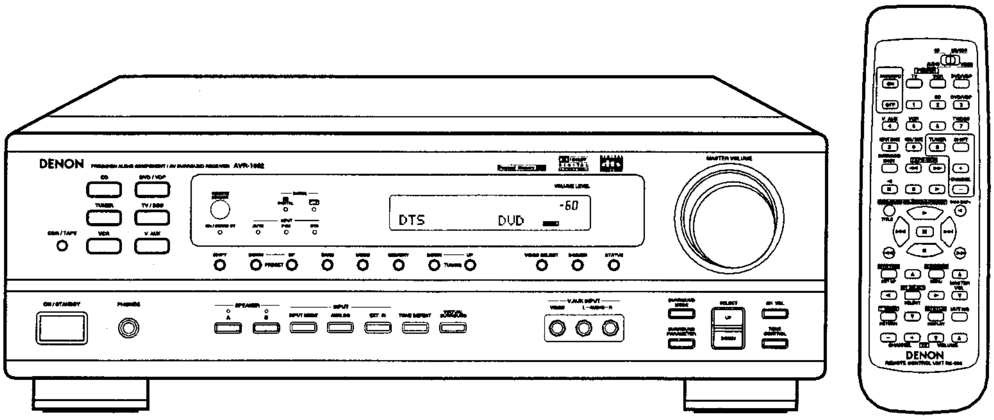
For U.S.A., Canada, Europe, Asia, China, Hong Kong & Taiwan R.O.C. model

Hi-Fi Component

SERVICE MANUAL

MODEL AVR-1602/682

AV SURROUND RECEIVER



- Some illustrations using in this service manual are slightly different from the actual set.

NIPPON COLUMBIA CO., LTD.

14-14, AKASAKA 4-CHOME, MINATO-KU, TOKYO 107-8011 JAPAN
Telephone: 03 (3584) 8111

SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

SPECIFICATIONS

■ Audio Section

Power Amplifier

Rated output:	Front:	70W+70W	(8Ω/ohms, 20Hz~20kHz with 0.08% T.H.D)
		100W+100W	(6Ω/ohms, 1kHz with 0.7% T.H.D) (U.S.A., Canada & Europe Models)
		110W+110W	(6Ω/ohms, EIAJ) (Asia Model)
	Center:	70W	(8Ω/ohms, 20Hz~20kHz with 0.08% T.H.D)
		100W	(6Ω/ohms, 1kHz with 0.7% T.H.D) (U.S.A., Canada & Europe Models)
		110W	(6Ω/ohms, EIAJ) (Asia Model)
	Surround:	70W+70W	(8Ω/ohms, 20Hz~20kHz with 0.08% T.H.D)
		100W+100W	(6Ω/ohms, 1kHz with 0.7% T.H.D) (U.S.A., Canada & Europe Models)
		110W+110W	(6Ω/ohms, EIAJ) (Asia Model)
Output terminals:	Front:	A or B	6 to 16W/ohms
		A+B	12 to 16W/ohms
	Center/Surround:		6 to 16W/ohms

Analog

LINE input - PRE OUT

Input sensitivity/input impedance:	200mV/47kΩ/kohms	
Frequency response:	10Hz~100kHz: +1, -3dB	(TONE DEFEAT ON)
S/N ratio:	98dB (IHF-A weighted)	(TONE DEFEAT ON)

■ Video Section

Standard video jacks

Input/output level and impedance:	1Vp-p,75Ω/ohms
Frequency response:	5Hz~10MHz — +1, -3dB

S-video jacks (U.S.A., Canada & Asia Models)

Input/output level and impedance:	Y(brightness)signal — 1Vp-p, 75Ω/ohms C(color)signal — 0.286Vp-p, 75Ω/ohms
Frequency response:	5Hz~10MHz: — +1, -3dB

■ Tuner section

Receiving range:	**[FM]** (note: μV at 75Ω/ohms, 0dBf =1×10^{-15}W)	**[AM]**
U.S.A., Canada Models:	87.50MHz~107.90MHz	520kHz~1710kHz
Europe & Asia (for China) Models:	87.50MHz~108.00MHz	522kHz~1611kHz
Asia (for Multiple voltage) Models:	87.50MHz~107.90MHz (0.2MHz steps) 87.50MHz~108.00MHz (0.05MHz steps)	520kHz~1710kHz (10kHz steps) 522kHz~1611kHz (9kHz steps)
Usable sensitivity:	1.0μV (11.2dBf)	18μV
50 dB quieting sensitivity:	MONO 1.6μV (15.3dBf) STEREO 23μV (38.5dBf)	
S/N ratio:	MONO 80dB (IHF-A weighted) STEREO 75dB (IHF-A weighted)	
Total harmonic distortion:	MONO 0.15% (1kHz) STEREO 0.3% (1kHz)	

■ General

Power supply:	
U.S.A., Canada Models	AC120V,60Hz
Europe Model	AC230V,50Hz
Asia(for Multiple voltage)Model	AC115/230V,50/60Hz
Asia(for China)Model	AC220V,50Hz
Power consumption:	3.7A (USA & Canada model), 200W (Europe & Asia model)
Maximum external dimensions:	434 (W) × 147 (H) × 417 (D) mm (17-3/32″ × 5-25/32″ × 16-7/16″)
Mass:	9.8kg (20 lbs 9.7 oz)

■ Remote control unit (RC-896)

Batteries:	R6P/AA Type (two batteries)
External dimensions:	54 (W) × 172.5 (H) × 29 (D) mm (2-1/8″ × 6-51/64″ × 1-9/64″)
Mass:	120g (Approx. 4.2 oz) (including batteries)

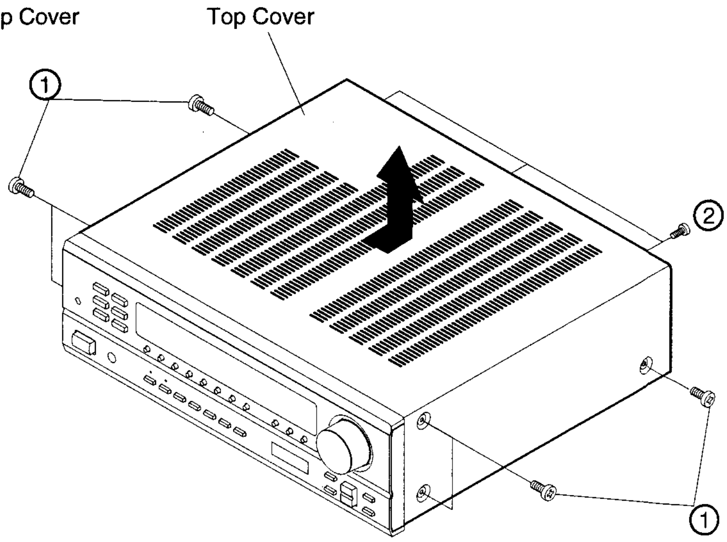
* For purposes of improvement, specifications and design are subject to change without notice.

DISASSEMBLY

(Follow the procedure below in reverse order when reassembling)

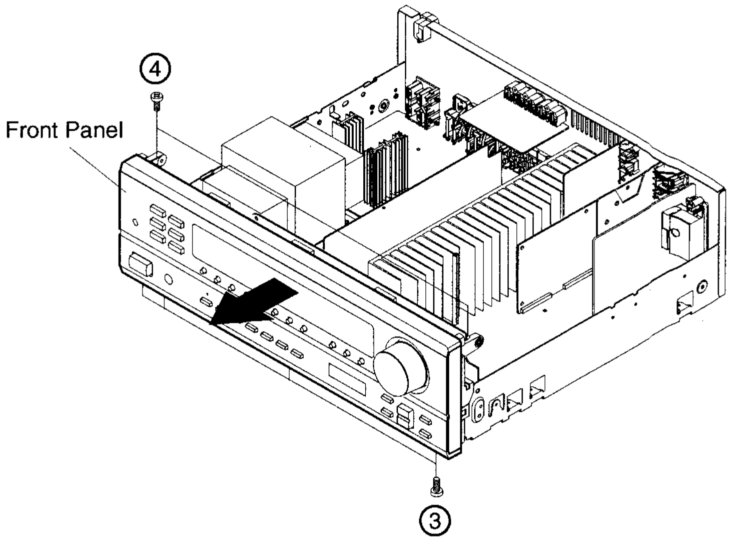
Top Cover

Remove 6 screws ① and 3 screws ②, detach the Top Cover in the arrow direction.



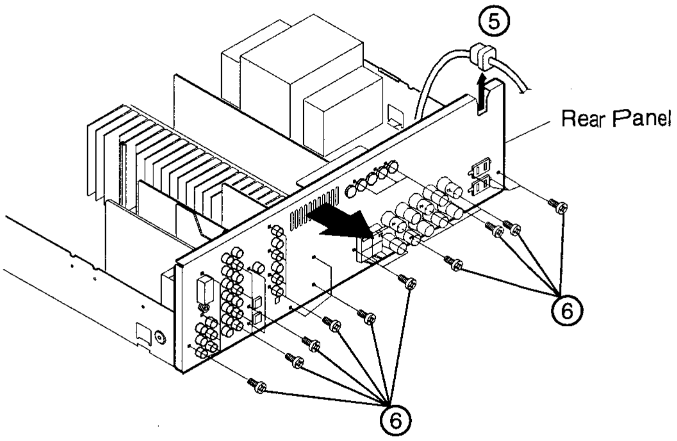
Front Panel

1. Remove 4 screws ③ and 2 screws ④.
2. Detach the Front Panel in the arrow direction.



Rear Panel

1. Remove cord bushing ⑤ from the Rear Panel.
2. Remove 31 screws ⑥.
3. Detach the Rear Panel in the arrow direction.



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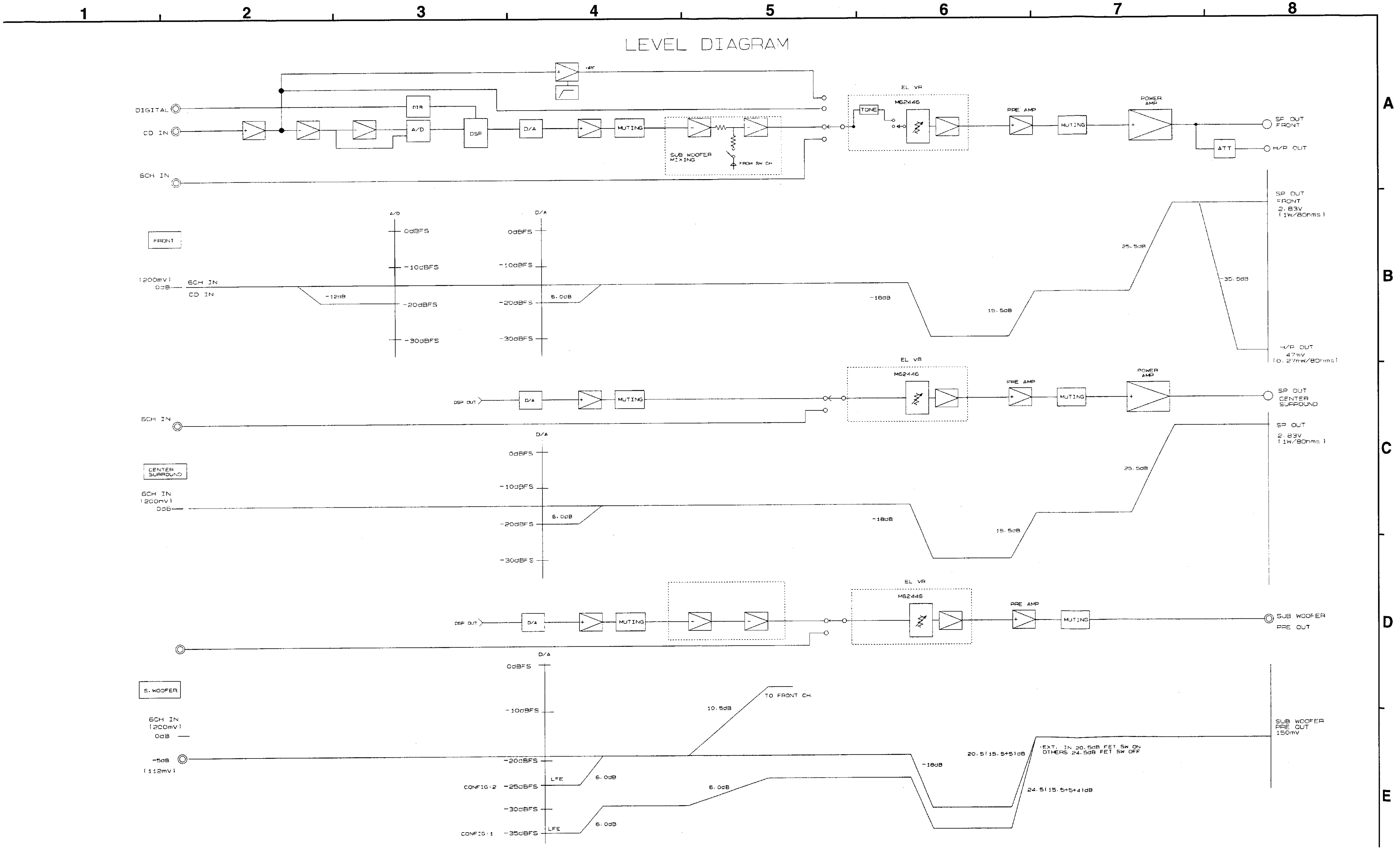
LEVEL DIAGRAM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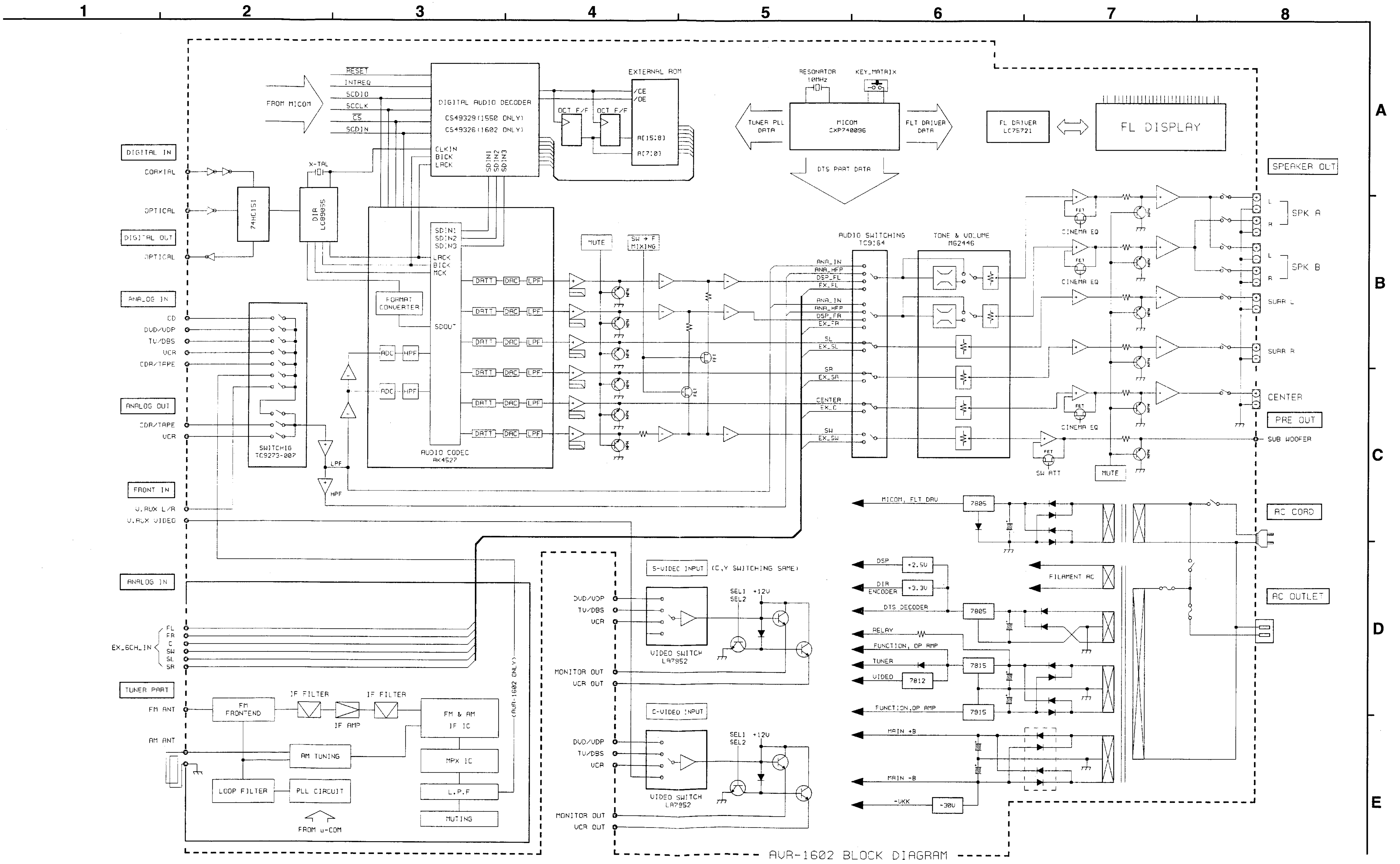
LEVEL DIAGRAM
HPF
DIGITAL
CD IN
6CH IN
DIR
A/D
DSP
D/A
MUTING
SUB WOOFER MIXING
FROM SW CH
EL VR
M62446
TONE
PRE AMP
POWER AMP
SP OUT FRONT
ATT
H/P OUT
FRONT
(200mV) 0dB
6CH IN
CD IN
-12dB
A/D
0dBFS
-10dBFS
-20dBFS
-30dBFS
6.0dB
-18dB
15.5dB
25.5dB
-35.5dB
SP OUT FRONT 2.83V (1W/8Ohms)
H/P OUT 47mV (0.27mW/8Ohms)
DSP OUT
SP OUT CENTER SURROUND
SP OUT 2.83V (1W/8Ohms)
CENTER SURROUND
6CH IN (200mV) 0dB
SUB WOOFER PRE OUT
S.WOOFER
TO FRONT CH.
10.5dB
-5dB (112mV)
LFE
CONFIG:2
-25dBFS
CONFIG:1
-35dBFS
20.5(15.5+5)dB
24.5(15.5+5+4)dB
EXT. IN 20.5dB FET SW ON
OTHERS 24.5dB FET SW OFF
SUB WOOFER PRE OUT 150mV

BLOCK DIAGRAM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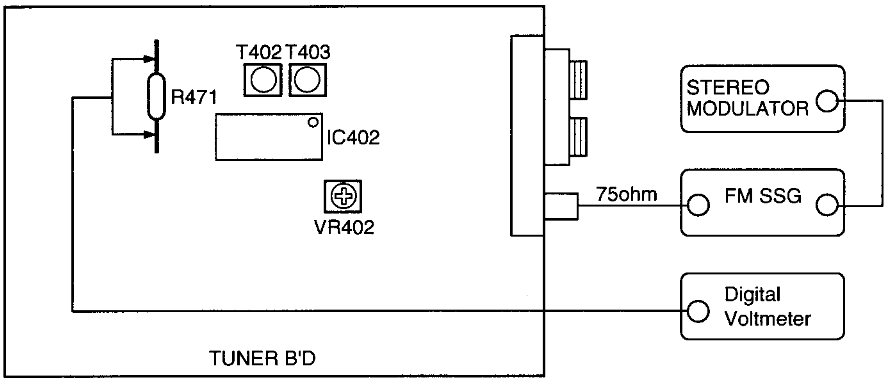
FROM MICOM
RESET
INTREQ
SCDIO
SCCLK
CS
SCDIN
DIGITAL AUDIO DECODER
CS49329(1550 ONLY)
CS49326(1602 ONLY)
CLKIN
BICK
LRCK
SDIN1
SDIN2
SDIN3
EXTERNAL ROM
/CE
/OE
A[15:8]
A[7:0]
OCT F/F
OCT F/F
RESONATOR
10MHz
KEY MATRIX
TUNER PLL DATA
MICOM
CXP740096
FLT DRIVER DATA
DTS PART DATA
FL DRIVER
LC75721
FL DISPLAY
DIGITAL IN
COAXIAL
OPTICAL
DIGITAL OUT
OPTICAL
74HC151
X-TAL
DIR
LC89055
SDIN1
SDIN2
SDIN3
LRCK
BICK
MCK
FORMAT CONVERTER
SDOUT
ADC
HPF
ADC
HPF
DATT
DAC
LPF
AUDIO CODEC
AK4527
MUTE
SW → F MIXING
NPN
FET
ANALOG IN
CD
DVD/VDP
TV/DBS
VCR
CDR/TAPE
ANALOG OUT
CDR/TAPE
VCR
SWITCHIG
TC9273-007
LPF
HPF
FRONT IN
V.AUX L/R
V.AUX VIDEO
AUDIO SWITCHING
TC9164
ANA_IN
ANA_HFP
DSP_FL
EX_FL
ANA_IN
ANA_HFP
DSP_FR
EX_FR
SL
EX_SL
SR
EX_SR
CENTER
EX_C
SW
EX_SW
TONE & VOLUME
M62446
CINEMA EQ
CINEMA EQ
CINEMA EQ
SW ATT
MUTE
SPEAKER OUT
L
R
SPK A
L
R
SPK B
SURR L
SURR R
CENTER
PRE OUT
SUB WOOFER
AC CORD
AC OUTLET
MICOM, FLT DRV
7805
DSP
+2.5V
DIR ENCODER
+3.3V
FILAMENT AC
DTS DECODER
7805
RELAY
FUNCTION, OP AMP
TUNER
7815
VIDEO
7812
FUNCTION,OP AMP
7915
MAIN +B
MAIN -B
-VKK
-30V
ANALOG IN
EX_6CH_IN
FL
FR
C
SW
SL
SR
TUNER PART
FM ANT
AM ANT
FM FRONTEND
IF FILTER
IF AMP
IF FILTER
FM & AM IF IC
AM TUNING
MPX IC
LOOP FILTER
PLL CIRCUIT
L.P.F
MUTING
FROM u-COM
(AVR-1602 ONLY)
S-VIDEO INPUT
(C,Y SWITCHING SAME)
DVD/VDP
TV/DBS
VCR
VIDEO SWITCH
LA7952
SEL1
SEL2
+12V
MONITOR OUT
VCR OUT
C-VIDEO INPUT
DVD/VDP
TV/DBS
VCR
VIDEO SWITCH
LA7952
SEL1
SEL2
+12V
MONITOR OUT
VCR OUT
AVR-1602 BLOCK DIAGRAM

ADJUSTMENT

Tuner Section

CONNECTION DIAGRAM OF MEASURING INSTRUMENTS

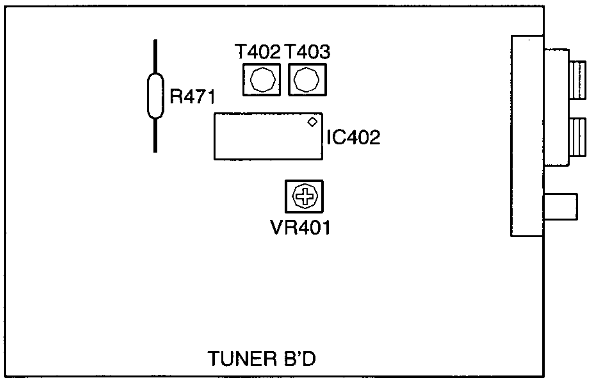
- **FM**


T402
T403
R471
IC402
VR402
TUNER B'D
75ohm
STEREO MODULATOR
FM SSG
Digital Voltmeter

FM ALIGNMENT

Step	Alignment Item	Tuning Frequency Setting	Input					Output		Adjustment	
			Type	Frequency	Input Level	Modulation	Coupling	Type	Connect to	Points	Adjust to
1	Center Adjustment	98.1MHz (98.0MHz)	FM SSG	98.1MHz	60dBμ	Mono 1kHz 100%	Antenna Terminal	Digital Voltmeter	R471	T402	± 50mV
2	Distortion	98.1MHz (98.0MHz)	FM SSG	98.1MHz	60dBμ	Mono 1kHz 100%	Antenna Terminal	Distortion Meter	Output Terminal (L)	T403	Minimum Distortion
3	Repeat Steps 1 and 2										
4	Signal Level	98.1MHz (98.0MHz)	FM SSG	98.1MHz	20dBμ	OFF	Antenna Terminal	Light "TUNED" on FL Display		VR402	20^{+14}_{-10} dB

- **AM**


T402
T403
R471
IC402
VR401
TUNER B'D

AM ALIGNMENT

Step	Alignment Item	Frequency	Input	Output		Adjustment		Remarks
				Type	Connect to	Points	Adjust to	
1	Signal Level	999 (1000) kHz	AM SSG	—	—	VR401	Light "TUNED" on FL Display	SSG OUTPUT 74dBμ (EMF)

Audio Section

Idling Current

Required measurement equipment : DC Voltmeter

Preparation

(1) Avoid direct blow from an air conditioner or an electric fan, and adjust the unit at normal room tempereture 15 °C ~ 30 °C (59 °F ~ 86 °F).

(2) Presetting
- POWER (Power sourse switch) → OFF
- SPEAKER (Speaker terminal) → No load (Do not connect speaker, dummy resistor, etc.)

Adjustment

(1) Remove top cover and set VR101, VR102, VR103, VR104, VR105 on Amp. Unit at full counterclockwise (↺) position.

(2) Connect DC Voltmeter to test points (FRONT-Lch: TP104, FRONT-Rch: TP105, CENTER ch: TP103, SURROUND-Lch: TP101, SURROUND-Rch: TP102).

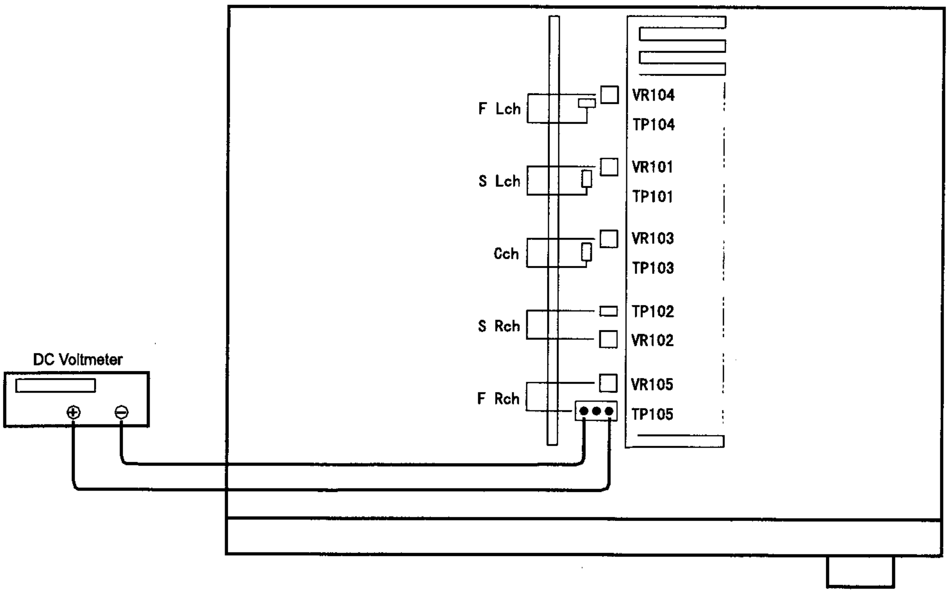
(3) Connect power cord to AC Line, and turn power switch "ON".

(4) Presetting.
MASTER VOLUME : "---" counterclockwise (↺ min.)
MODE : 5CH STEREO
FUNCTION : CD

(5) Within 2 minutes after the power on, turn VR101 clockwise (↻) to adjust the TEST POINT voltage to 1.5 mV ±0.5 mV DC.

(6) After 10 minutes from the preset above, turn VR101 to set the voltage to 2.5 mV ±0.5 mV DC.

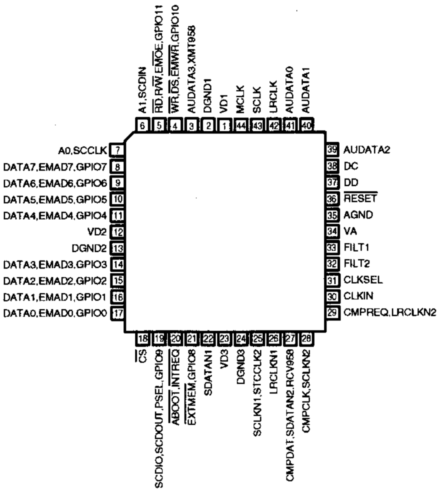
(7) Adjust the Variable Resistors of other channels in the same way.



SEMICONDUCTORS

● IC's

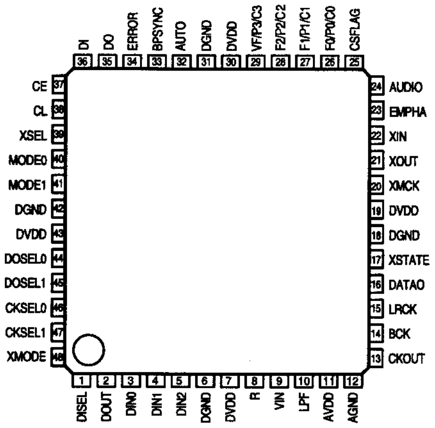
CS49326-CL
(IC812)


A1,SCDIN
RD,R/W,EMOE,GPIO11
WR,DS,EMWR,GPIO10
AUDATA3,XMT958
DGND1
VD1
MCLK
SCLK
LRCLK
AUDATA0
AUDATA1
6
5
4
3
2
1
44
43
42
41
40
A0,SCCLK 7
DATA7,EMAD7,GPIO7 8
DATA6,EMAD6,GPIO6 9
DATA5,EMAD5,GPIO5 10
DATA4,EMAD4,GPIO4 11
VD2 12
DGND2 13
DATA3,EMAD3,GPIO3 14
DATA2,EMAD2,GPIO2 15
DATA1,EMAD1,GPIO1 16
DATA0,EMAD0,GPIO0 17
39 AUDATA2
38 DC
37 DD
36 RESET
35 AGND
34 VA
33 FILT1
32 FILT2
31 CLKSEL
30 CLKIN
29 CMPREQ,LRCLKN2
18
19
20
21
22
23
24
25
26
27
28
CS
SCDIO,SCDOUT,PSEL,GPIO9
ABOOT,INTREQ
EXTMEM,GPIO8
SDATAN1
VD3
DGND3
SCLKN1,STCCLK2
LRCLKN1
CMPDAT,SDATAN2,RCV958
CMPCLK,SCLKN2

CS49326-CL Terminal Function

Pin No.	Pin Name	Function
1	VD1	Digital positive supply
2	DGND1	Digital supply ground
3	AUDATA3, XMT958	SPDIF transmitter output, Digital audio output 3
4	$\overline{WR}$, $\overline{DS}$, $\overline{EMWR}$, GPIO10	Host write strobe or host data strobe or external memory write enable or general purpose input & output number 10
5	$\overline{RD}$, R/$\overline{W}$, $\overline{EMOE}$, GPIO11	Host parallel output enable or host parallel R/$\overline{W}$ or external memory output enable or general purpose input & output number11
6	A1, SCDIN	Host address bit one or SPI serial control data input
7	A0, SCCLK	Host parallel address bit zero or serial control port clock
8	DATA7, EMAD7, GPIO7	
9	DATA6, EMAD6, GPIO6	
10	DATA5, EMAD5, GPIO5	
11	DATA4, EMAD4, GPIO4	
12	VD2	Digital positive supply
13	DGND2	Digital supply ground
14	DATA3, EMAD3, GPIO3	
15	DATA2, EMAD2, GPIO2	
16	DATA1, EMAD1, GPIO1	
17	DATA0, EMAD0, GPIO0	
18	$\overline{CS}$	Host parallel chip select, host serial SPI chip select
19	SCDIO, SCDOUT, PSEL, GPIO9	Serial control port data input and output, parallel port type select
20	$\overline{INTREQ}$, $\overline{ABOOT}$	Control port interrupt request, automatic boot enable
21	$\overline{EXTMEM}$, GPIO8	External memory chip select or general purpose input & output number 8
22	SDATAN1	PCM audio data input number one
23	VD3	Digital positive supply
24	DGND3	Digital supply ground
25	SCLKN1, STCCLK2	PCM audio input bit clock
26	LRCLKN1	PCM audio input sample rate clock
27	CMPDAT, SDATAN2, RCV958	PCM audio data input number two
28	CMPCLK, SCLKN2	PCM audio input bit clock
29	CMPREQ, LRCLKN2	PCM audio input sample rate clock
30	CLKIN	Master clock input
31	CLKSEL	DSP clock select
32	FILT2	Phase locked loop filter
33	FILT1	Phase locked loop filter
34	VA	Analog positive supply
35	AGND	Analog supply ground
36	$\overline{RESET}$	Master reset input
37	DD	Reserved
38	DC	Reserved
39	AUDATA2	Digital audio output 2
40	AUDATA1	Digital audio output 1
41	AUDATA0	Digital audio output 0
42	LRCLK	Audio output sample rate clock
43	SCLK	Audio output bit clock
44	MCLK	Audio master clock

LC89055W (IC810)

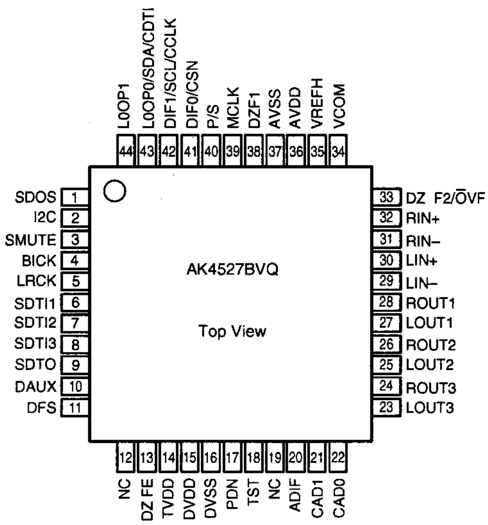

DI
36
DO
35
ERROR
34
BPSYNC
33
AUTO
32
DGND
31
DVDD
30
VF/P3/C3
29
F2/P2/C2
28
F1/P1/C1
27
F0/P0/C0
26
CSFLAG
25
AUDIO
24
EMPHA
23
XIN
22
XOUT
21
XMCK
20
DVDD
19
DGND
18
XSTATE
17
DATAO
16
LRCK
15
BCK
14
CKOUT
13
CE
37
CL
38
XSEL
39
MODE0
40
MODE1
41
DGND
42
DVDD
43
DOSEL0
44
DOSEL1
45
CKSEL0
46
CKSEL1
47
XMODE
48
1
DISEL
2
DOUT
3
DIN0
4
DIN1
5
DIN2
6
DGND
7
DVDD
8
R
9
VIN
10
LPF
11
AVDD
12
AGND

LC89055W Terminal Function

Pin No.	Pin Name	I/O	Function
1	DISEL	I	Data input terminal (select input pin of DIN0, DIN1)
2	DOUT	O	Input bi-phase data through output terminal
3	DIN0	I	Amp built-in coaxial/optical input correspond data input terminal
4	DIN1	I	Amp built-in coaxial/optical input correspond data input terminal
5	DIN2	I	Optical input correspond data input terminal
6	DGND		Digital GND
7	DVDD		Digital power supply
8	R	I	VCO gain control input terminal
9	VIN	I	VCO free-run frequency setting input terminal
10	LPF	O	PLL loop filter setting terminal
11	AVDD		Analog power supply
12	AGND		Analog GND
13	CKOUT	O	Clock output terminal (256fs, 384fs, 512fs, X'tal osc., VCO free-run osc.)
14	BCK	O	64fs clock output terminal
15	LRCK	O	fs clock output terminal (L: Rch, H: Lch, I²S: Reverse)
16	DATAO	O	Data output terminal
17	XSTATE	O	Input data detecting result output terminal
18	DGND		Digital GND
19	DVDD		Digital power supply
20	XMCK	O	X'tal osc. clock output terminal (24.576MHz or 12.288MHz)
21	XOUT	O	X'tal osc. connection output terminal
22	XIN	I	X'tal osc. connection input terminal, external signal input possible (24.576MHz or 12.288MHz)
23	EMPHA	O	Emphasis information output terminal of channel status
24	AUDIO	O	Bit1 output terminal of channel status
25	CSFLAG	O	Top 40bit revise flag output terminal of channel status
26	F0/P0/C0	O	Input fs cal. sig. out/data type out/input word inf. output terminal
27	F1/P1/C1	O	Input fs cal. sig. out/data type out/input word inf. output terminal
28	F2/P2/C2	O	Input fs cal. sig. out/data type out/input word inf. output terminal
29	VF/P3/C3	O	Validity flag out/data type out/input word inf. output terminal
30	DVDD		Digital power supply
31	DGND		Digital GND
32	AUTO	O	Non PCM burst data transfer detect sig. output terminal
33	BPSYNC	O	Non PCM burst data preamble Pa, Pb, Pc, Pd sync sig. output terminal
34	ERROR	O	PLL lock error, data error flag output terminal
35	DO	O	CPU/IFD read data output terminal
36	DI	I	CPU I/F write data input terminal
37	CE	I	CPU I/F chip enable input terminal
38	CL	I	CPU I/F chip enable input terminal
39	XSEL	I	Frequency select input pin of XIN X'tal osc. (24.576MHz or 12.288MHz)
40	MODE0	I	Mode setting input terminal
41	MODE1	I	Mode setting input terminal
42	DGND		Digital GND
43	DVDD		Digital power supply
44	DOSEL0	I	Data output format select input terminal
45	DOSEL1	I	Data output format select input terminal
46	CKSEL0	I	Output clock select input terminal
47	CKSEL1	I	Output clock select input terminal
48	XMODE	I	Reset input terminal

- For latch-up countermeasure, set digital (DVDD) and analog (AVDD) power on/off in the same timing.

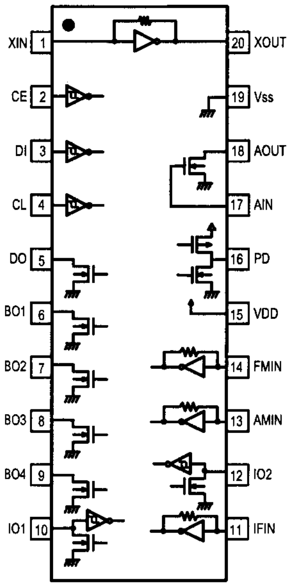
AK4527BVQ (IC813)


LOOP1
LOOP0/SDA/CDTI
DIF1/SCL/CCLK
DIF0/CSN
P/S
MCLK
DZF1
AVSS
AVDD
VREFH
VCOM
44
43
42
41
40
39
38
37
36
35
34
SDOS 1
I2C 2
SMUTE 3
BICK 4
LRCK 5
SDTI1 6
SDTI2 7
SDTI3 8
SDTO 9
DAUX 10
DFS 11
AK4527BVQ
Top View
33 DZ F2/OVF
32 RIN+
31 RIN–
30 LIN+
29 LIN–
28 ROUT1
27 LOUT1
26 ROUT2
25 LOUT2
24 ROUT3
23 LOUT3
12
13
14
15
16
17
18
19
20
21
22
NC
DZ FE
TVDD
DVDD
DVSS
PDN
TST
NC
ADIF
CAD1
CAD0

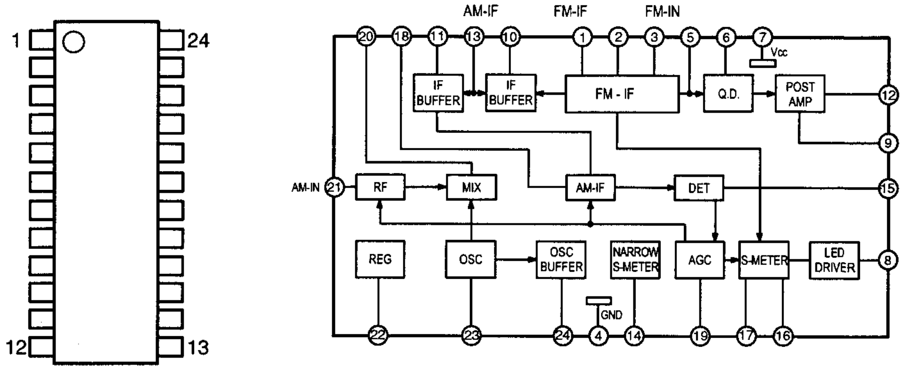
AK4527BVQ Terminal Function

Pin No.	Pin Name	I/O	Function
1	SDOS	I	SDTO source select pin, L: Internal ADC output, H: DAUX input
2	I2C	I	Serial control mode select pin, L: 3-core serial, H: I^{2}C bus
3	SMUTE	I	Soft mute pin, H: Soft mute start, L: Release
4	BICK	I	Audio serial data clock pin
5	LRCK	I	Input channel clock pin
6	SDTI1	I	DAC1 audio serial data input pin
7	SDTI2	I	DAC2 audio serial data input pin
8	SDTI3	I	DAC3 audio serial data input pin
9	SDTO	O	Audio serial data output pin
10	DAUX	I	Auxiliary audio serial data input pin
11	DFS	I	Double speed sampling mode pin, L: Normal, H: Double
12	NC	—	No Connect, No internal bonding
13	DZFE	I	Zero input detect enable pin
14	TVDD	—	Power pin for output buffer, 2.7V~5.5V
15	DVDD	—	Digital power pin, 4.5V~5.5V
16	DVss	—	Digital GND pin, 0V
17	PDN	I	Power down & reset pin, L: Powered-down and register initialized, Reset with PDN when switching P/S or CAD0-1
18	TST	I	Test pin, connected to DVSS
19	NC	—	No Connect, No internal bonding
20	ADIF	I	Analog Input Format Select pin
21	CAD1	I	Chip address-1 pin
22	CAD0	I	Chip address-0 pin
23	LOUT3	O	DAC3L channel analog out pin
24	ROUT3	O	DAC3R channel analog out pin
25	LOUT2	O	DAC2L channel analog out pin
26	ROUT2	O	DAC2R channel analog out pin
27	LOUT1	O	DAC1L channel analog out pin
28	ROUT1	O	DAC1R channel analog out pin
29	LIN-	I	L-ch analog inverted input pin
30	LIN+	I	L-ch analog non-inverted input pin
31	RIN-	I	R-ch analog inverted input pin
32	RIN+	I	R-ch analog non-inverted input pin
33	DZF2/OVF	O	0 input detect 2 pin/Analog input overflow detect pin
34	VCOM	O	Common V-out pin, AVDD/2, connect large capacitor to avoid noise
35	VREFH	I	Ref. V input pin, AVDD
36	AVDD	—	Analog GND pin, 4.5V~5.5V
37	AVss	—	Analog GND pin, 0V
38	DZF1	O	0 input detect pin, H: Input data of G1 is 8192 times "0" in a raw or RSTN bit "0"
39	MCLK	I	Master clock input pin
40	P/S	I	Parallel/Serial select pin, L: Serial control
41	DIF0	I	Audio data I/F format 0 pin (parallel control)
	CSN	I	Chip select pin (3-wire serial control), connect to DVDD when I^{2}C bus control
42	DIFI	I	Audio data I/F format 1 pin (parallel control)
	SCL/CCLK	I	Control data clock pin (serial control), I^{2}C="L": CCLK (3-wire serial), I^{2}C="H": SCL (I^{2}C bus)
43	LOOP0	I	Loop back mode 0 pin (parallel control), effects digital loop back ADC to all DAC
	SDA/CDTI	I/O	Control data input pin (serial control), I^{2}C="L": CCTI (3-wire serial), I^{2}C ="H" SDA (I^{2}C bus)
44	LOOP1	I	Loop back mode 1 pin, from SDT1 to all DAC

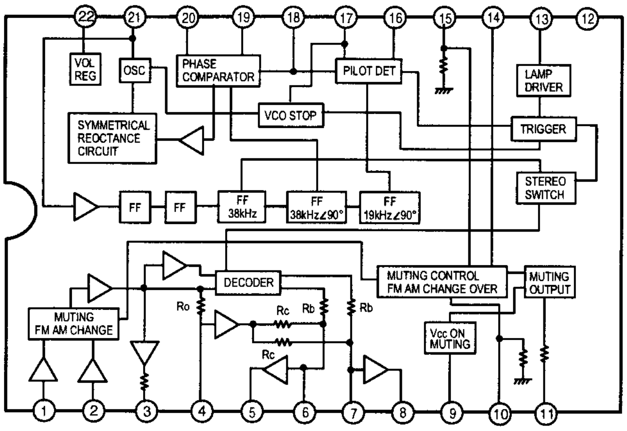
LC72131 (IC401)


XIN 1
CE 2
DI 3
CL 4
DO 5
BO1 6
BO2 7
BO3 8
BO4 9
IO1 10
20 XOUT
19 Vss
18 AOUT
17 AIN
16 PD
15 VDD
14 FMIN
13 AMIN
12 IO2
11 IFIN

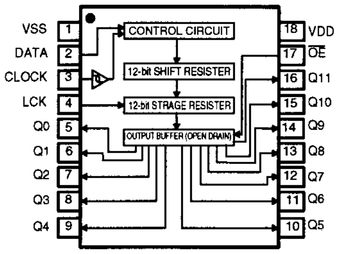
LA1266 (IC402)


1
24
12
13
AM-IF
FM-IF
FM-IN
Vcc
IF BUFFER
IF BUFFER
FM - IF
Q.D.
POST AMP
AM-IN
RF
MIX
AM-IF
DET
REG
OSC
OSC BUFFER
NARROW S-METER
AGC
S-METER
LED DRIVER
GND

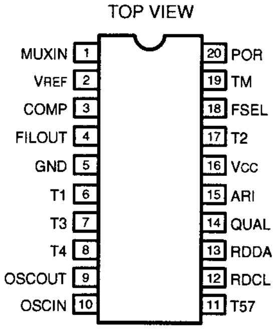
LA3401 (IC403)


VOL REG
OSC
PHASE COMPARATOR
PILOT DET
LAMP DRIVER
VCO STOP
SYMMETRICAL REOCTANCE CIRCUIT
TRIGGER
STEREO SWITCH
FF
FF
FF 38kHz
FF 38kHz∠90°
FF 19kHz∠90°
DECODER
MUTING CONTROL FM AM CHANGE OVER
MUTING OUTPUT
MUTING FM AM CHANGE
Ro
Rc
Rb
Rb
Rc
Vcc ON MUTING

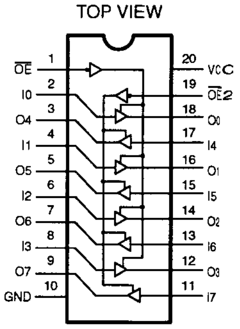
BU2090F (IC302)


VSS 1
DATA 2
CLOCK 3
LCK 4
Q0 5
Q1 6
Q2 7
Q3 8
Q4 9
18 VDD
17 OE
16 Q11
15 Q10
14 Q9
13 Q8
12 Q7
11 Q6
10 Q5
CONTROL CIRCUIT
12-bit SHIFT RESISTER
12-bit STRAGE RESISTER
OUTPUT BUFFER (OPEN DRAIN)

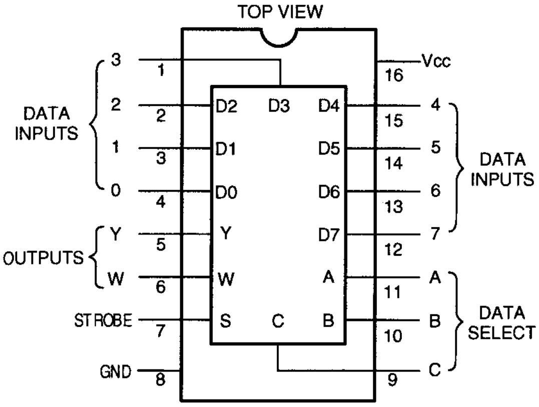
TDA7330BD (IC202)


TOP VIEW
MUXIN 1
VREF 2
COMP 3
FILOUT 4
GND 5
T1 6
T3 7
T4 8
OSCOUT 9
OSCIN 10
20 POR
19 TM
18 FSEL
17 T2
16 VCC
15 ARI
14 QUAL
13 RDDA
12 RDCL
11 T57

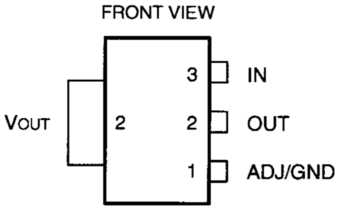
MM74LCX244 (IC818,819)


TOP VIEW
OE 1
I0 2
O4 3
I1 4
O5 5
I2 6
O6 7
I3 8
O7 9
GND 10
20 VCC
19 OE2
18 O0
17 I4
16 O1
15 I5
14 O2
13 I6
12 O3
11 I7

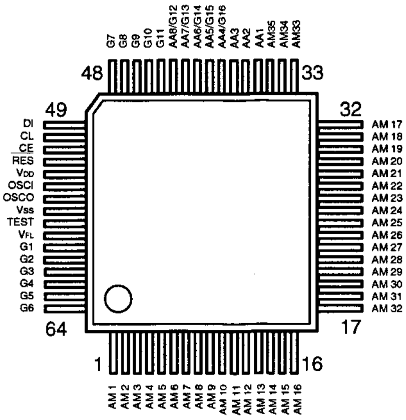
MM74HC151 (IC832)


TOP VIEW
DATA INPUTS
3 1
2 2
1 3
0 4
OUTPUTS
Y 5
W 6
STROBE 7
GND 8
D2 D3 D4
D1 D5
D0 D6
Y D7
W A
S C B
16 Vcc
15 4
14 5
13 6
12 7
11 A
10 B
9 C
DATA INPUTS
DATA SELECT

RC1117S25T (IC820)
RC1117S33ST (IC811)


FRONT VIEW
VOUT
2
3 IN
2 OUT
1 ADJ/GND

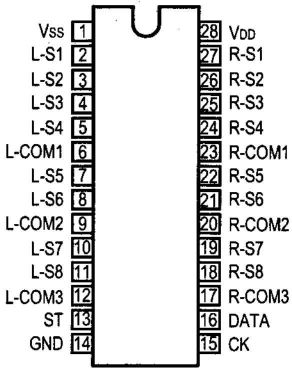
LC75721E (IC301)


G7
G8
G9
G10
G11
AA8/G12
AA7/G13
AA6/G14
AA5/G15
AA4/G16
AA3
AA2
AA1
AM35
AM34
AM33
48
33
49
32
DI
CL
CE
RES
VDD
OSCI
OSCO
Vss
TEST
VFL
G1
G2
G3
G4
G5
G6
AM 17
AM 18
AM 19
AM 20
AM 21
AM 22
AM 23
AM 24
AM 25
AM 26
AM 27
AM 28
AM 29
AM 30
AM 31
AM 32
64
17
1
16
AM 1
AM 2
AM 3
AM 4
AM 5
AM 6
AM 7
AM 8
AM 9
AM 10
AM 11
AM 12
AM 13
AM 14
AM 15
AM 16

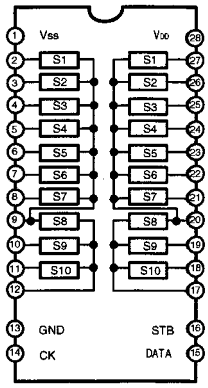
● LC75721E Terminal Function

Symbol	Function
V_{DD}	Power terminal +5V
V_{SS}	Power terminal GND
V_{FL}	Power terminal FL drive
DI CL CE	Serial data transfer terminal DI: Data CL: Clock CE: Chip enable
OSCI OSCO	External CR connecting terminal
$\overline{\text{RES}}$	System reset terminal
AM1~AM35 AA1~AA3	Anode output terminal
AA4/G16 AA5/G15 AA6/G14 AA7/G13 AA8/G12	Anode/Grid output terminal
G1~G11	Grid output terminal
TEST	LSI test terminal

KIC9164AN (IC221)


Vss 1
L-S1 2
L-S2 3
L-S3 4
L-S4 5
L-COM1 6
L-S5 7
L-S6 8
L-COM2 9
L-S7 10
L-S8 11
L-COM3 12
ST 13
GND 14
28 VDD
27 R-S1
26 R-S2
25 R-S3
24 R-S4
23 R-COM1
22 R-S5
21 R-S6
20 R-COM2
19 R-S7
18 R-S8
17 R-COM3
16 DATA
15 CK

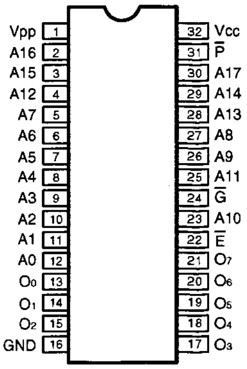
TC9273N-007(IC701)

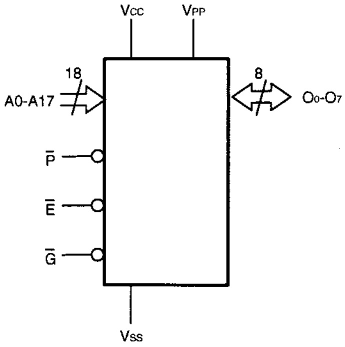

1 Vss
28 VDD
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
13 GND
14 CK
16 STB
15 DATA

● TC9273N Terminal Function

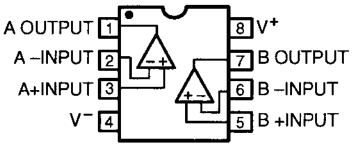
Pin No.	Symbol	Name	Function	
1	Vss	+ Power Terminal	Dual Power Use:V_{DD}=8.0~17V Single Power Use:V_{DD}=8.0~18V GND=0V GND=0V Vss=–8.0~–17V	
13	GND	Digital Ground		
28	V_{DD}	+ Power Terminal		
2~12 12~27	S1~S10	I/O Terminal	Input terminal of analog switch.	
14	CK	Clock Input	Clock input for data transfer.	Low level Border Input Terminal
15	DATA	Data Input	Serial input for switch setting.	
16	STB	Strobe Input	Strobe InputStrobe input for data writing.	

W27W201 (IC807)

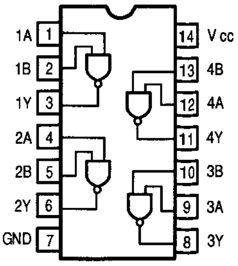

Vpp 1
A16 2
A15 3
A12 4
A7 5
A6 6
A5 7
A4 8
A3 9
A2 10
A1 11
A0 12
O0 13
O1 14
O2 15
GND 16
32 Vcc
31 P̄
30 A17
29 A14
28 A13
27 A8
26 A9
25 A11
24 Ḡ
23 A10
22 Ē
21 O7
20 O6
19 O5
18 O4
17 O3


Vcc
VPP
18
A0-A17
8
O0-O7
P̄
Ē
Ḡ
Vss

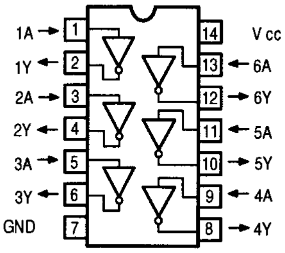
NJM2068DD
(IC241,251,261,271,281,291,702,703)
BA4510F (IC805~806)
NJM2068MD (IC814~816)


A OUTPUT 1
A –INPUT 2
A+INPUT 3
V⁻ 4
8 V⁺
7 B OUTPUT
6 B –INPUT
5 B +INPUT

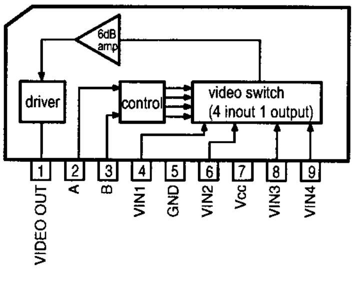
SN74LV00APW (IC822)


1A 1
1B 2
1Y 3
2A 4
2B 5
2Y 6
GND 7
14 Vcc
13 4B
12 4A
11 4Y
10 3B
9 3A
8 3Y

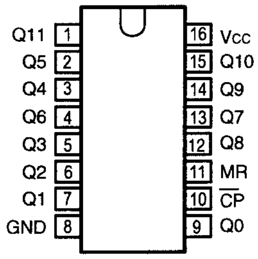
74HCU04 (IC803)


1A 1
1Y 2
2A 3
2Y 4
3A 5
3Y 6
GND 7
14 Vcc
13 6A
12 6Y
11 5A
10 5Y
9 4A
8 4Y

LA7952 (IC601,651,652)


6dB amp
driver
control
video switch (4 inout 1 output)
1 VIDEO OUT
2 A
3 B
4 VIN1
5 GND
6 VIN2
7 Vcc
8 VIN3
9 VIN4

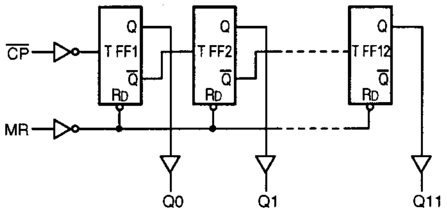
SN74LV4040 (IC831)


Q11 1
Q5 2
Q4 3
Q6 4
Q3 5
Q2 6
Q1 7
GND 8
16 Vcc
15 Q10
14 Q9
13 Q7
12 Q8
11 MR
10 CP
9 Q0

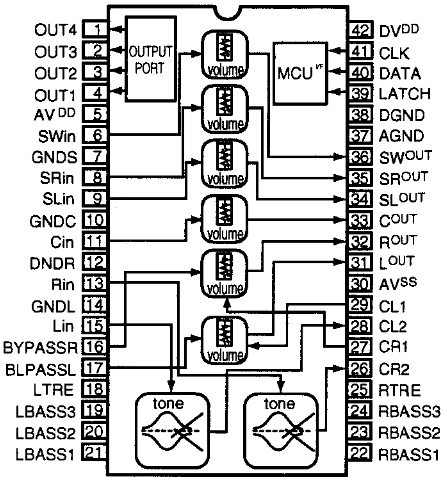
Terminal Function

INPUTS		OUTPUTS
$\overline{CP}$	MR	Qn
↑	L	no change
↓	L	count
X	H	L

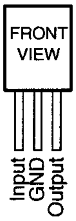
H=HIGH voltage level
L=LOW voltage level
X=don't care
↑=LOW-to-HIGH clock transition
↓=HIGH-to-LOW clock transition


CP
MR
Q
T FF1
Q
RD
T FF2
T FF12
Q0
Q1
Q11

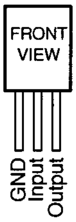
M62446FP (IC231)


OUT4 1
OUT3 2
OUT2 3
OUT1 4
AVDD 5
SWin 6
GNDS 7
SRin 8
SLin 9
GNDC 10
Cin 11
DNDR 12
Rin 13
GNDL 14
Lin 15
BYPASSR 16
BLPASSL 17
LTRE 18
LBASS3 19
LBASS2 20
LBASS1 21
42 DVDD
41 CLK
40 DATA
39 LATCH
38 DGND
37 AGND
36 SWOUT
35 SROUT
34 SLOUT
33 COUT
32 ROUT
31 LOUT
30 AVSS
29 CL1
28 CL2
27 CR1
26 CR2
25 RTRE
24 RBASS3
23 RBASS2
22 RBASS1
OUTPUT PORT
volume
MCU
tone

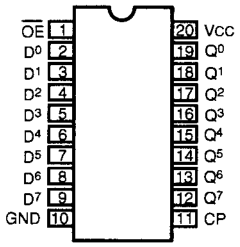
KIA7805AP (IC104)
KIA7815AP (IC101)
NJM7805FA (IC103,829)
NJM7812FA (IC602)


FRONT VIEW
Input
GND
Output

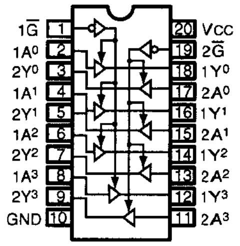
NJM7915FA (IC102)


FRONT VIEW
GND
Input
Output

MM74LCX574 (IC808,809)

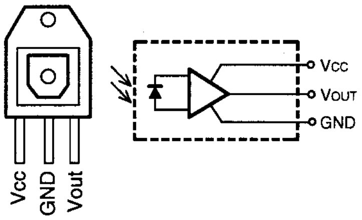

OE 1
D0 2
D1 3
D2 4
D3 5
D4 6
D5 7
D6 8
D7 9
GND 10
20 Vcc
19 Q0
18 Q1
17 Q2
16 Q3
15 Q4
14 Q5
13 Q6
12 Q7
11 CP

MM74HCT244 (IC828,830)

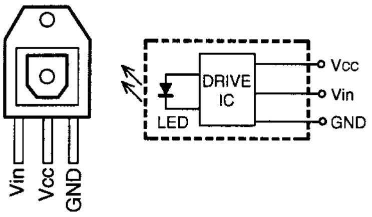

1G 1
1A0 2
2Y0 3
1A1 4
2Y1 5
1A2 6
2Y2 7
1A3 8
2Y3 9
GND 10
20 Vcc
19 2G
18 1Y0
17 2A0
16 1Y1
15 2A1
14 1Y2
13 2A2
12 1Y3
11 2A3

● OPTICAL

INPUT
GP1FA502RZ (IC802)

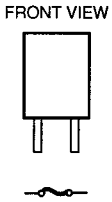

Vcc
VOUT
GND
Vcc
GND
Vout

OUTPUT
GP1FA502TZ(IC817)


DRIVE IC
LED
Vcc
Vin
GND
Vin
Vcc
GND

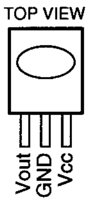
● IC PROTECTOR

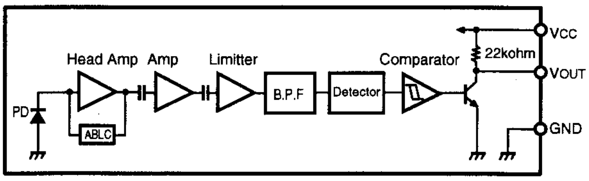
ICP-N15 (IC105)



● IR SENSOR

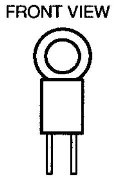
NJL64H380A(RMC301)


TOP VIEW
Vout
GND
Vcc


Head Amp
Amp
Limitter
Comparator
22kohm
VCC
VOUT
GND
PD
ABLC
B.P.F
Detector

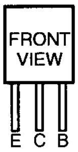
● POSISTOR

P43T7D330BW16

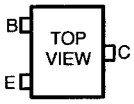


● TRANSISTORS

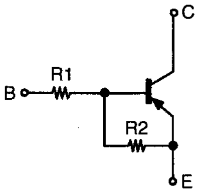
DTA114ES
DTC114TS
DTC114YS
DTC144ES


FRONT VIEW
E C B

DTA114EK
DTA114YK
DTA144EK
DTC114EK
DTC114YK
DTC144EK

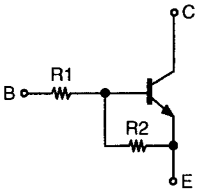

B
TOP VIEW
C
E

DTA Series



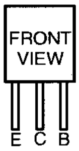
	R1	R2
DTA114EK	10kohm / Ω	10kohm / Ω
DTA114ES	10kohm / Ω	10kohm / Ω
DTA114YK	10kohm / Ω	47kohm / Ω
DTA144EK	47kohm / Ω	47kohm / Ω

DTC Series

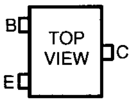


	R1	R2
DTC114EK	10kohm / Ω	10kohm / Ω
DTC114TS	10kohm / Ω	—
DTC114YK	10kohm / Ω	47kohm / Ω
DTC114YS	10kohm / Ω	47kohm / Ω
DTC144EK	47kohm / Ω	47kohm / Ω
DTC144ES	47kohm / Ω	47kohm / Ω

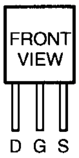
2SC1740S
2SC3199Y
KSA916Y
KSA992F
KSC1845F
KTA1266Y
KTA1268BL
KTC2874B
KTC3198Y
KTC3200BL


FRONT VIEW
E C B

2SC2412K
KTC3880S

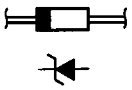

B
TOP VIEW
C
E

2SK117

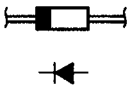

FRONT VIEW
D G S

● DIODES (LED included)

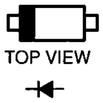
MTZJ3.3B
MTZJ5.1B
MTZJ5.6B
MTZJ6.8B
MTZJ7.5A
MTZJ7.5B
MTZJ11B
MTZJ18B
MTZJ20B



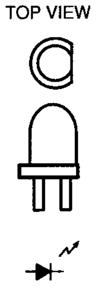
1N4007
1SS133



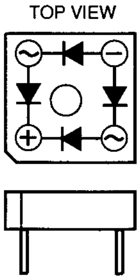
KDS160



HL-50RDRF4T

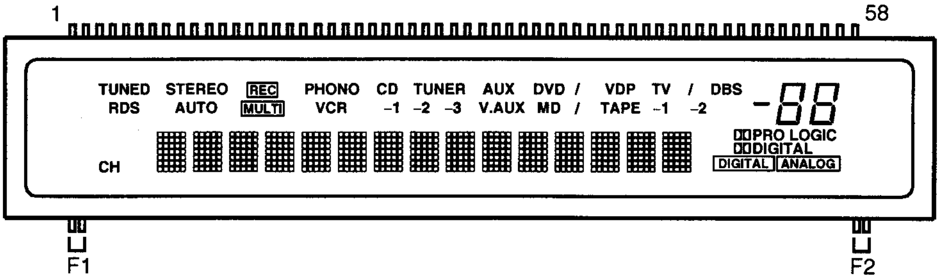


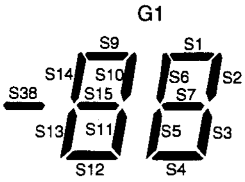
KBPC604

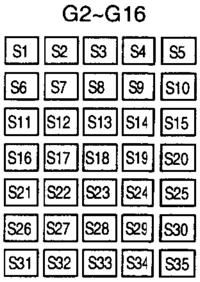


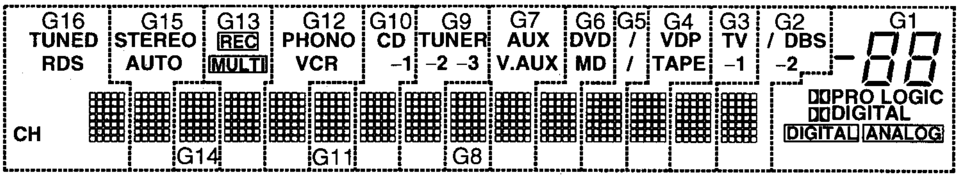
● FL DISPLAY

16-st-42GNK (FL301)


1
58
TUNED STEREO REC PHONO CD TUNER AUX DVD / VDP TV / DBS
RDS AUTO MULTI VCR -1 -2 -3 V.AUX MD / TAPE -1 -2
PRO LOGIC
DIGITAL
DIGITAL ANALOG
CH
F1
F2


G1
S9
S1
S14
S10
S6
S2
S38
S15
S7
S13
S11
S5
S3
S12
S4


G2~G16
S1 S2 S3 S4 S5
S6 S7 S8 S9 S10
S11 S12 S13 S14 S15
S16 S17 S18 S19 S20
S21 S22 S23 S24 S25
S26 S27 S28 S29 S30
S31 S32 S33 S34 S35


G16 TUNED RDS
G15 STEREO AUTO
G13 REC MULTI
G12 PHONO VCR
G10 CD -1
G9 TUNER -2 -3
G7 AUX V.AUX
G6 DVD MD
G5 / /
G4 VDP TAPE
G3 TV -1
G2 / DBS -2
G1
PRO LOGIC
DIGITAL
DIGITAL ANALOG
CH
G14
G11
G8

Pin Assignment

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CONNECTION	F1	F1	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18
PIN NO.	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CONNECTION	S19	S20	S21	S22	S23	S24	S25	S26	S27	S28	S29	S30	S31	S32	S33	S34	S35	S36	S37	S38
PIN NO.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58		
CONNECTION	G16	G15	G14	G13	G12	G11	G10	G9	G8	G7	G6	G5	G4	G3	G2	G1	F2	F2		

F1, F2 : Filament
G1~G16: Grid
S1~S38 : Anode

Anode & Grid Assignment

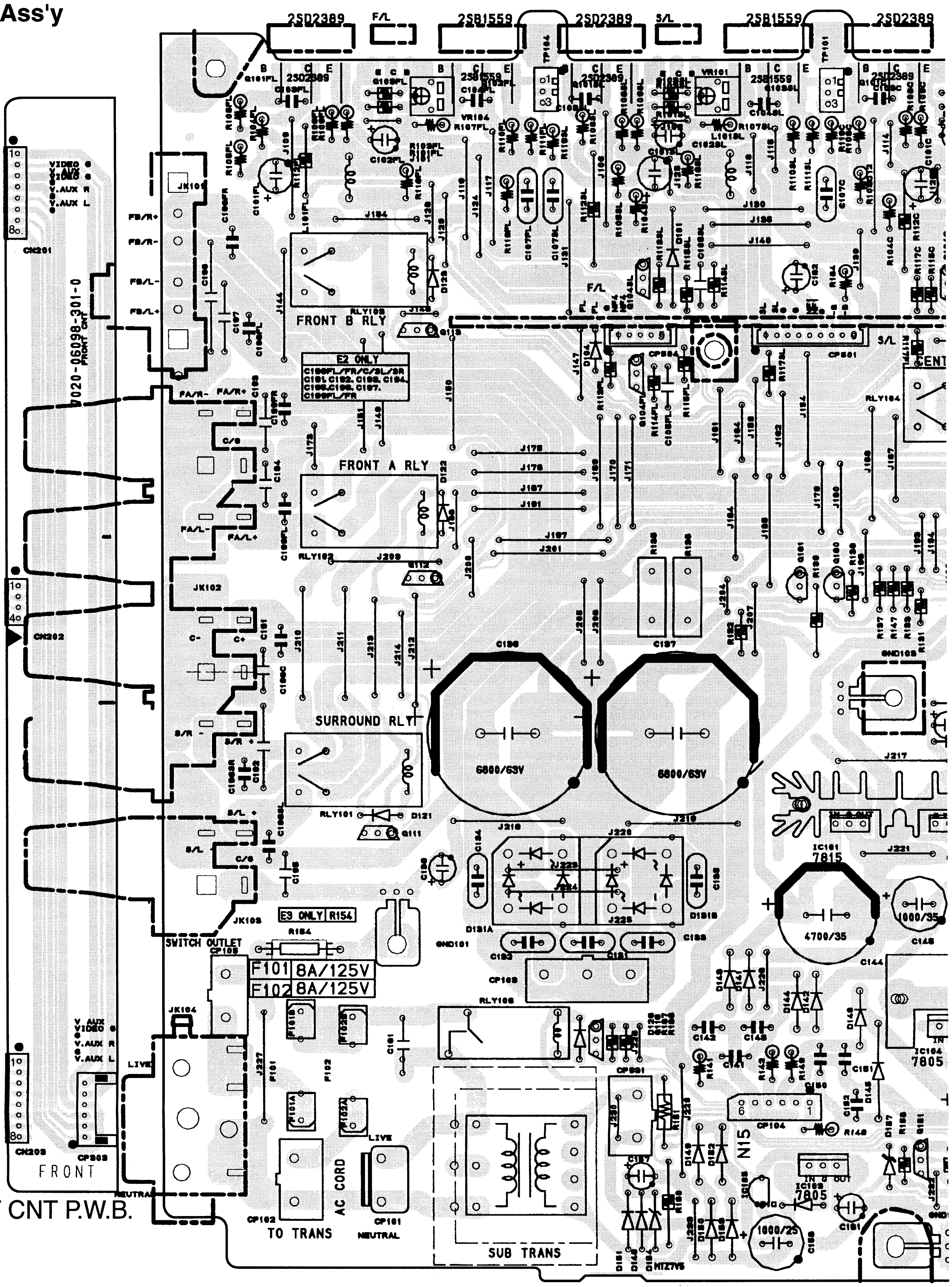
	G1	G2~G16		G1	G2~G16		G1	G2~G16		G1	G2~G16
S1	S1	S1	S10	S10	S10	S19	—	S19	S28	—	S28
S2	S2	S2	S11	S11	S11	S20	—	S20	S29	—	S29
S3	S3	S3	S12	S12	S12	S21	—	S21	S30	—	S30
S4	S4	S4	S13	S13	S13	S22	—	S22	S31	—	S31
S5	S5	S5	S14	S14	S14	S23	—	S23	S32	—	S32
S6	S6	S6	S15	S15	S15	S24	—	S24	S33	—	S33
S7	S7	S7	S16	—	S16	S25	—	S25	S34	—	S34
S8	—	S8	S17	DD DIGITAL	S17	S26	—	S26	S35	—	S35
S9	S9	S9	S18	DD PRO LOGIC	S18	S27	—	S27			

	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15	G16
S36	DIGITAL	/	TV	VDP	/(DVD)	DVD	AUX	—	TUNER	CD	—	PHONO	REC	—	STEREO	TUNED
S37	ANALOG	-2	-1	TAPE	/(MD)	MD	V.AUX	—	-2	-1	—	VCR	MULTI	—	AUTO	RDS
S38	S38	DBS	—	—	—	—	—	—	-3	—	—	—	—	—	—	CH

PRINTED WIRING BOARDS

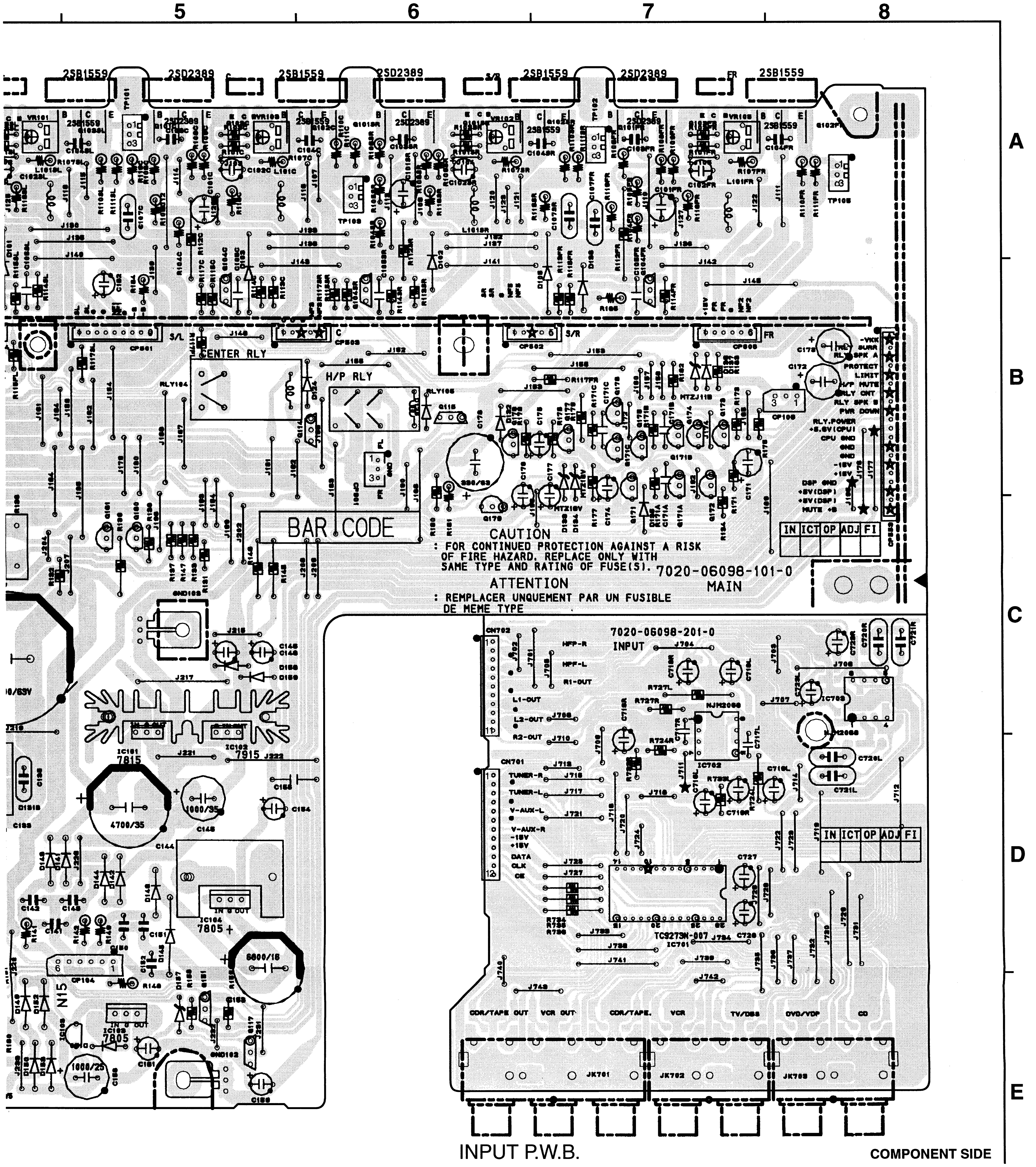
1 2 3 4 5

MAIN P.W.B. UNIT Ass'y


2SD2389
F/L
2SB1559
2SD2389
S/L
2SB1559
2SD2389
JK101
FB/R+
FB/R-
FB/L-
FB/L+
FRONT B RLY
E2 ONLY
C199FL/FR/C/SL/SR
C191.C192.C193.C194.
C195.C196.C197.
C199FL/FR
FA/R-
FA/R+
C/S
FRONT A RLY
FA/L-
FA/L+
RLY102
JK102
C-
C+
SURROUND RLY
S/R -
S/R +
RLY101
S/L +
S/L -
6800/63V
6800/63V
7815
4700/35
1000/35
JK103
E3 ONLY
R154
SWITCH OUTLET
F101 8A/125V
F102 8A/125V
JK104
LIVE
NEUTRAL
AC CORD
TO TRANS
SUB TRANS
7805
1000/25
7805
N15
CN201
CN202
CN203
VIDEO G
V.AUX R
V.AUX L
7020-06098-301-0
FRONT CNT
FRONT
RLY103
RLY104
CENT

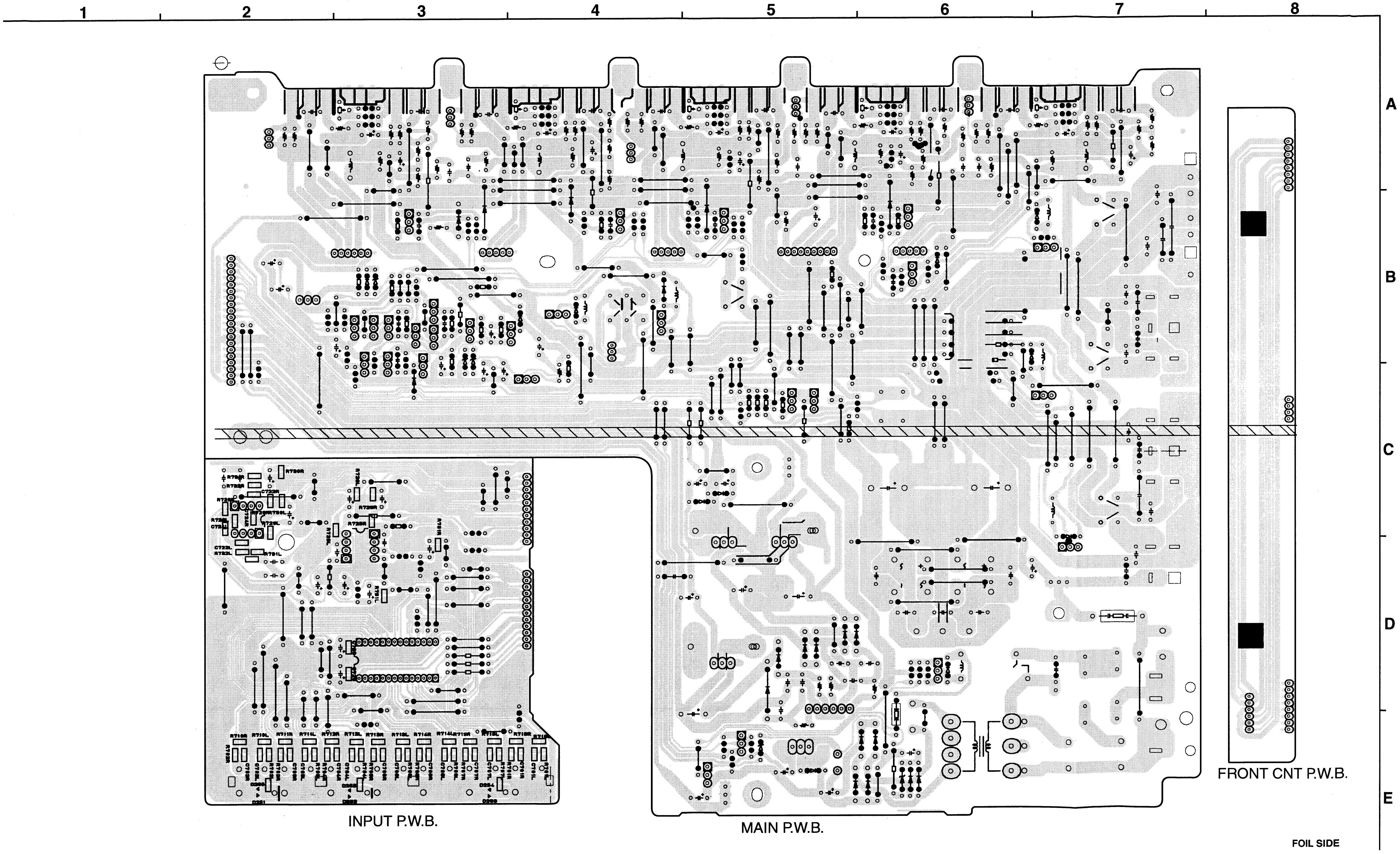
FRONT CNT P.W.B.

MAIN P.W.B.

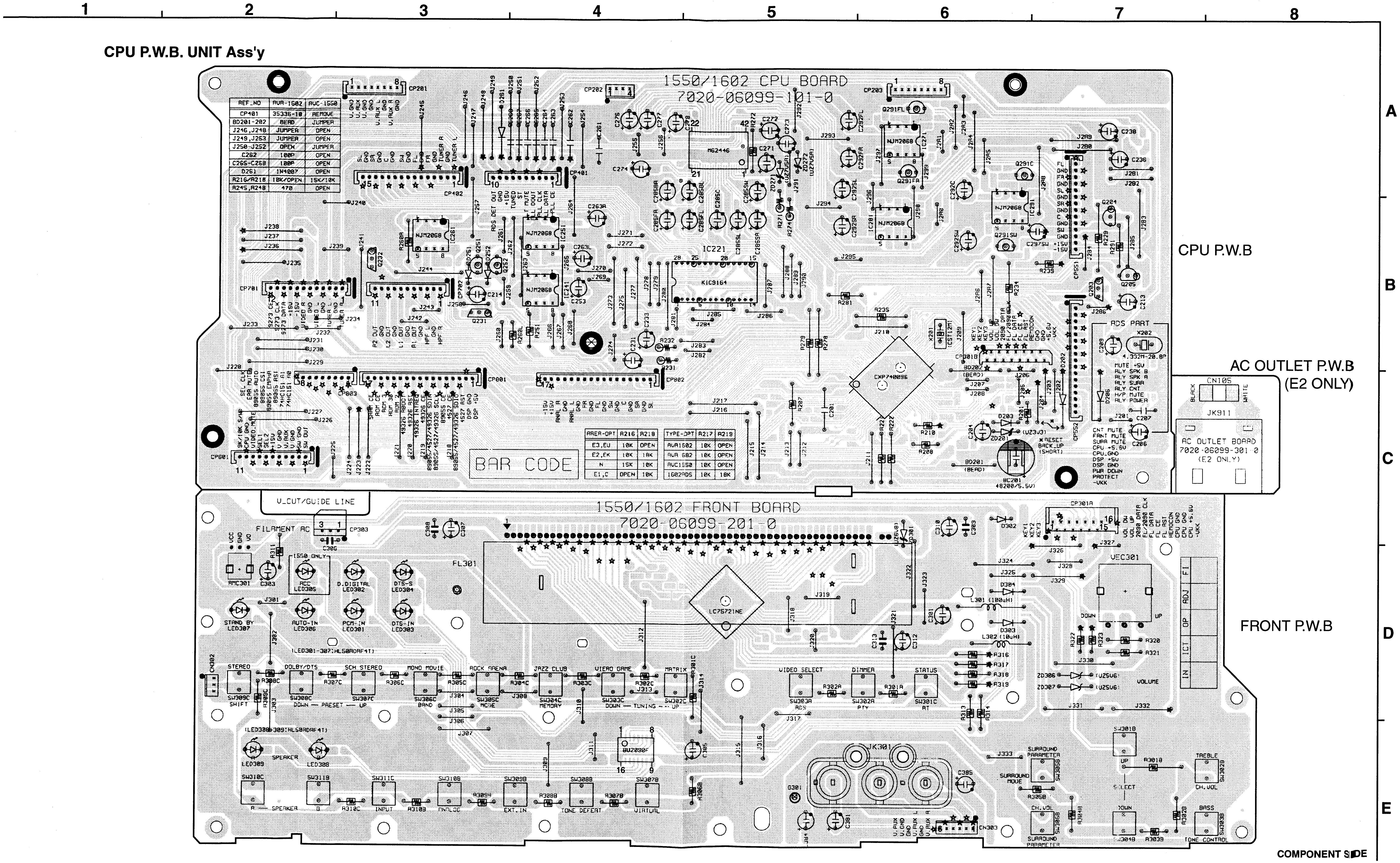

5
6
7
8
A
B
C
D
E
2SB1559
2SD2389
CENTER RLY
H/P RLY
BAR CODE
CAUTION
: FOR CONTINUED PROTECTION AGAINST A RISK
OF FIRE HAZARD. REPLACE ONLY WITH
SAME TYPE AND RATING OF FUSE(S).
ATTENTION
: REMPLACER UNIQUEMENT PAR UN FUSIBLE
DE MEME TYPE
7020-06098-101-0
MAIN
7020-06098-201-0
INPUT
IN
ICT
OP
ADJ
FI
7815
7915
7805
4700/35
1000/35
6800/16
1000/25
JK701
JK702
JK703
CDR/TAPE OUT
VCR OUT
CDR/TAPE
VCR
TV/DBS
DVD/VDP
CD
TC9273N-007
NJM2068
N15

INPUT P.W.B.

COMPONENT SIDE


1
2
3
4
5
6
7
8
A
B
C
D
E
INPUT P.W.B.
MAIN P.W.B.
FRONT CNT P.W.B.
FOIL SIDE

CPU P.W.B. UNIT Ass'y


1
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3
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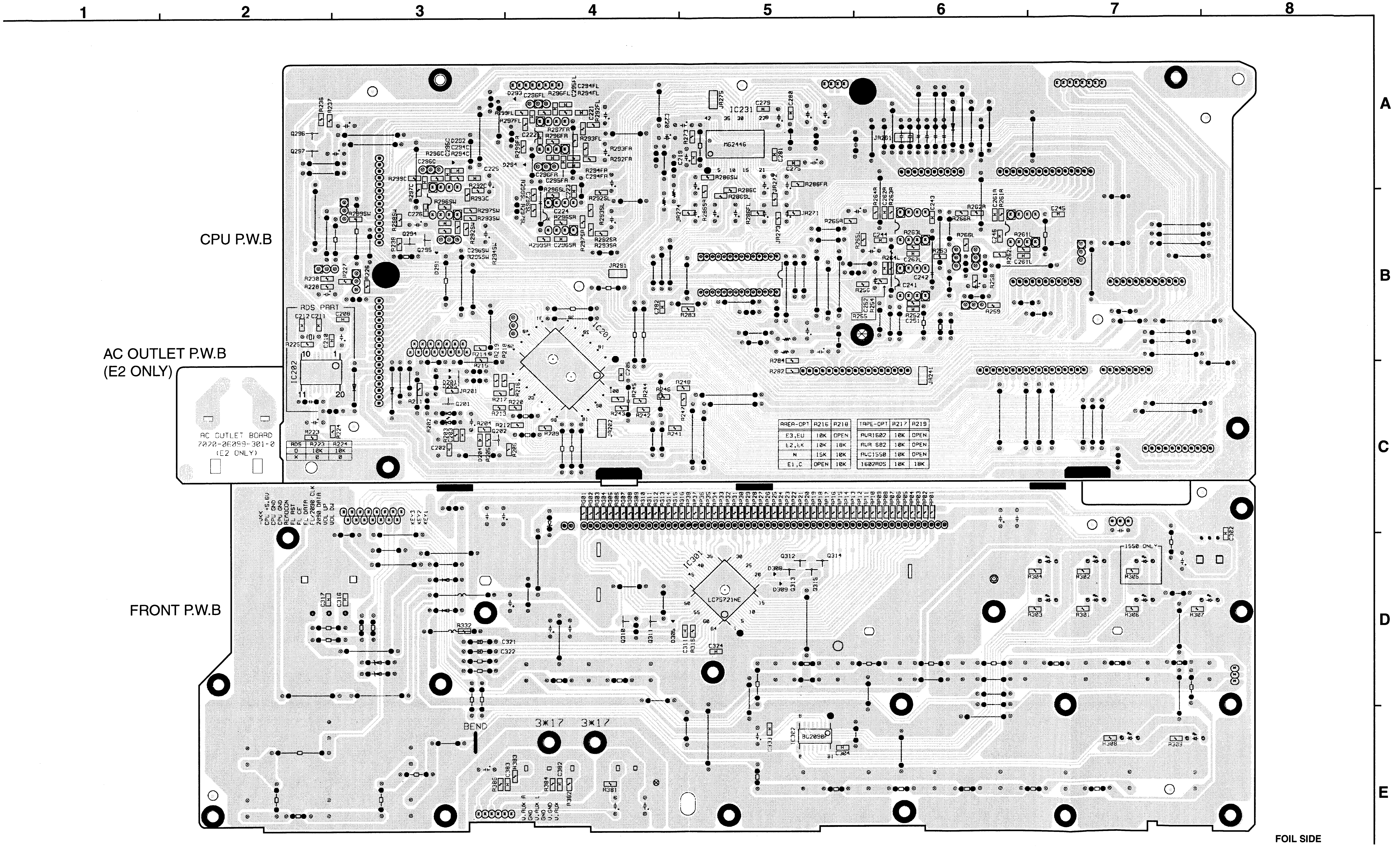
5
6
7
8
A
B
C
D
E
1550/1602 CPU BOARD
7020-06099-101-0
CPU P.W.B
AC OUTLET P.W.B
(E2 ONLY)
AC OUTLET BOARD
7020-06099-301-0
(E2 ONLY)
CN105
JK911
BLACK
WHITE
1550/1602 FRONT BOARD
7020-06099-201-0
FRONT P.W.B
BAR CODE
V_CUT/GUIDE LINE
RDS PART
IC221
KIC9164
M62446
NJM2068
CXP740096
LC75721NE
BU2090F
FL301
VEC301
JK301
CP201
CP202
CP203
CP401
CP402
CP551
CP552
CP601
CP701
CP702
CP801
CP802
CP803
CP301A
CP301B
CP303
CN303
FILAMENT AC
STAND BY
LED307
RMC301
ACC
LED305
D.DIGITAL
LED302
DTS-S
LED304
AUTO-IN
LED306
PCM-IN
LED301
DTS-IN
LED303
(LED301-307:HL50RDAF41)
(LED308-309:HL50RDAF41)
STEREO
DOLBY/DTS
5CH STEREO
MONO MOVIE
ROCK ARENA
JAZZ CLUB
VIDEO GAME
MATRIX
SHIFT
DOWN — PRESET — UP
BAND
MODE
MEMORY
DOWN — TUNING — UP
VIDEO SELECT
DIMMER
STATUS
RDS
PTY
RT
SPEAKER
A — SPEAKER — B
INPUT
ANALOG
EXT. IN
TONE DEFEAT
VIRTUAL
SURROUND PARAMETER
SURROUND MODE
CH.VOL
SELECT
UP
DOWN
TREBLE
BASS
TONE CONTROL
VOLUME
L301 (100uH)
L302 (10uH)
BD201 (BEAD)
BD202 (BEAD)
BC201 48200/5.5V
X202 4.332M-20.8P
X201 (CSTL2M1)
*RESET BACK_UP (SHORT)

REF_NO	AVR-1602	AVC-1550
CP401	35336-10	REMOVE
BD201-202	BEAD	JUMPER
J246,J248	JUMPER	OPEN
J249,J253	JUMPER	OPEN
J250-J252	OPEN	JUMPER
C262	100P	OPEN
C265-C268	100P	OPEN
D261	1N4007	OPEN
R216/R218	10K/OPEN	15K/10K
R245,R248	470	OPEN

AREA-OPT	R216	R218
E3,EU	10K	OPEN
E2,EK	10K	10K
N	15K	10K
E1,C	OPEN	10K

TYPE-OPT	R217	R219
AVR1602	10K	OPEN
AVR 682	10K	OPEN
AVC1550	10K	OPEN
1602RDS	10K	10K

COMPONENT SIDE


1
2
3
4
5
6
7
8
A
B
C
D
E
IC201
IC202
RDS PART
IC231
M62446
IC301
LC75721NE
IC302
BU2090F
1550 ONLY
BEND
3*17
3*17

CPU P.W.B

AC OUTLET P.W.B
(E2 ONLY)

FRONT P.W.B

AC OUTLET BOARD
7020-06099-301-0
(E2 ONLY)

RDS	R223	R224
O	10K	10K
×	0	0

AREA-OPT	R216	R218
E3,EU	10K	OPEN
E2,EK	10K	18K
N	15K	10K
E1,C	OPEN	10K

TAPE-OPT	R217	R219
AVR1602	10K	OPEN
AVR 682	10K	OPEN
AVC1550	10K	OPEN
1602RDS	10K	18K

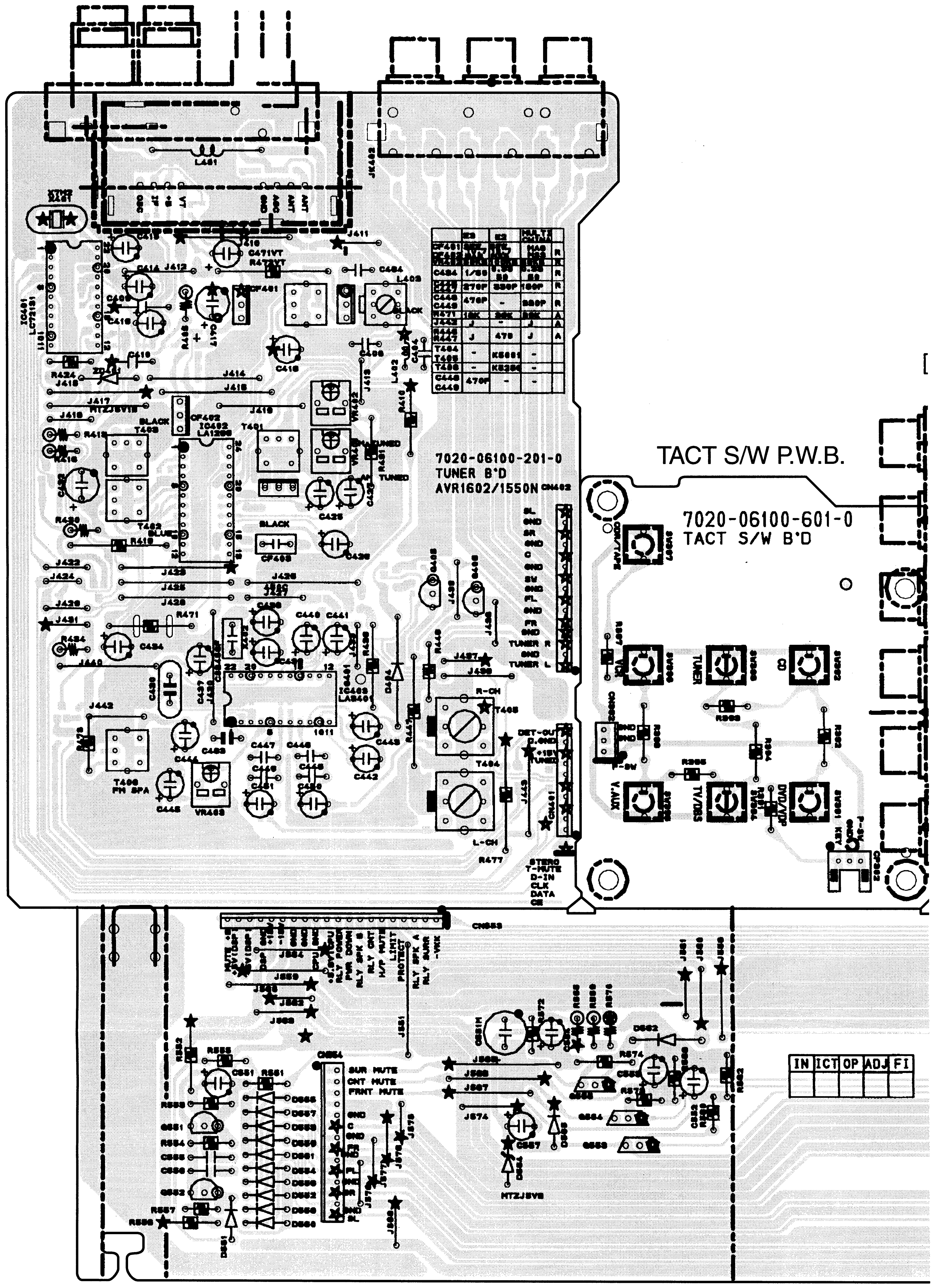
FOIL SIDE

1 2 3 4

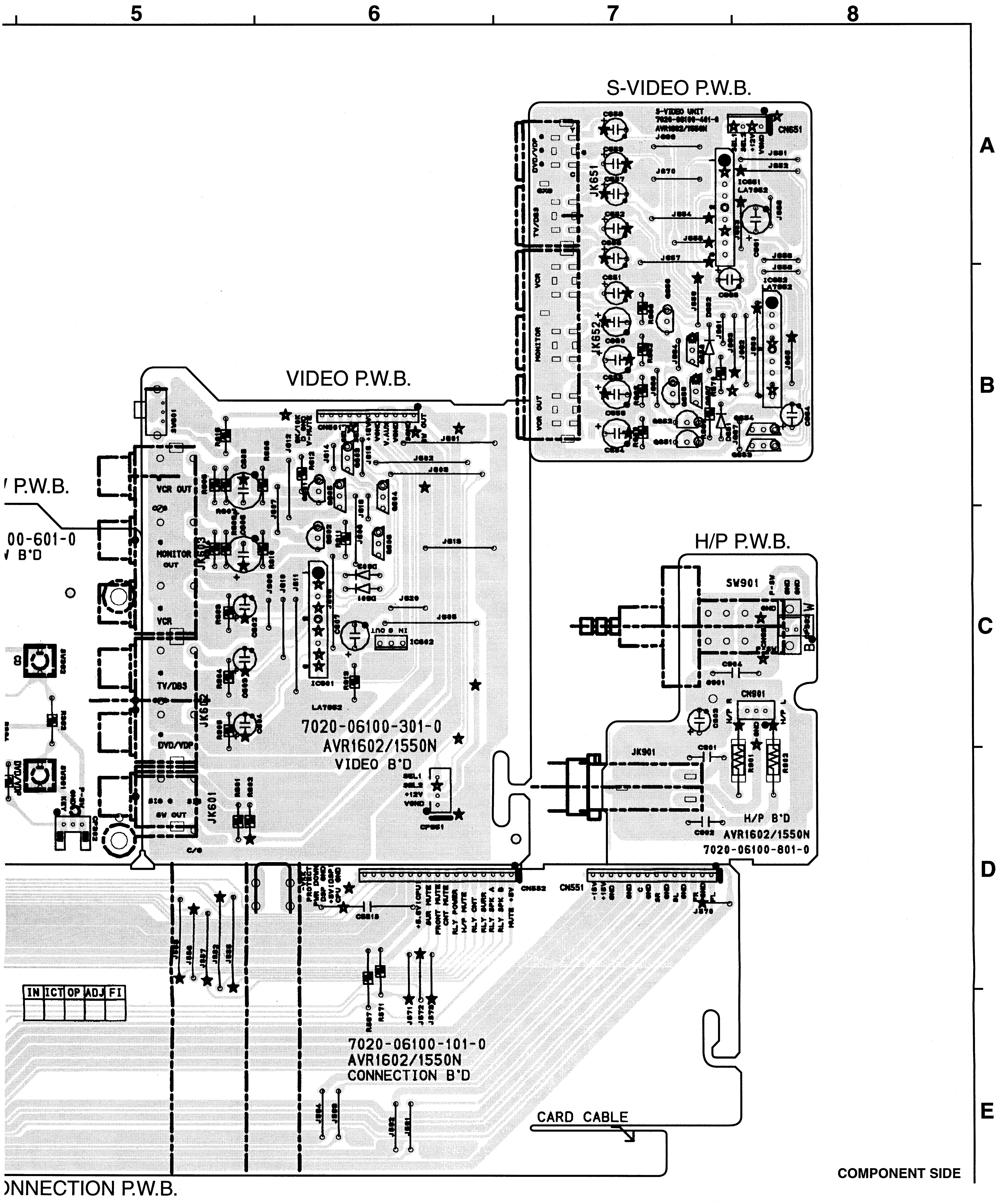
CONNECTION P.W.B. UNIT Ass'y

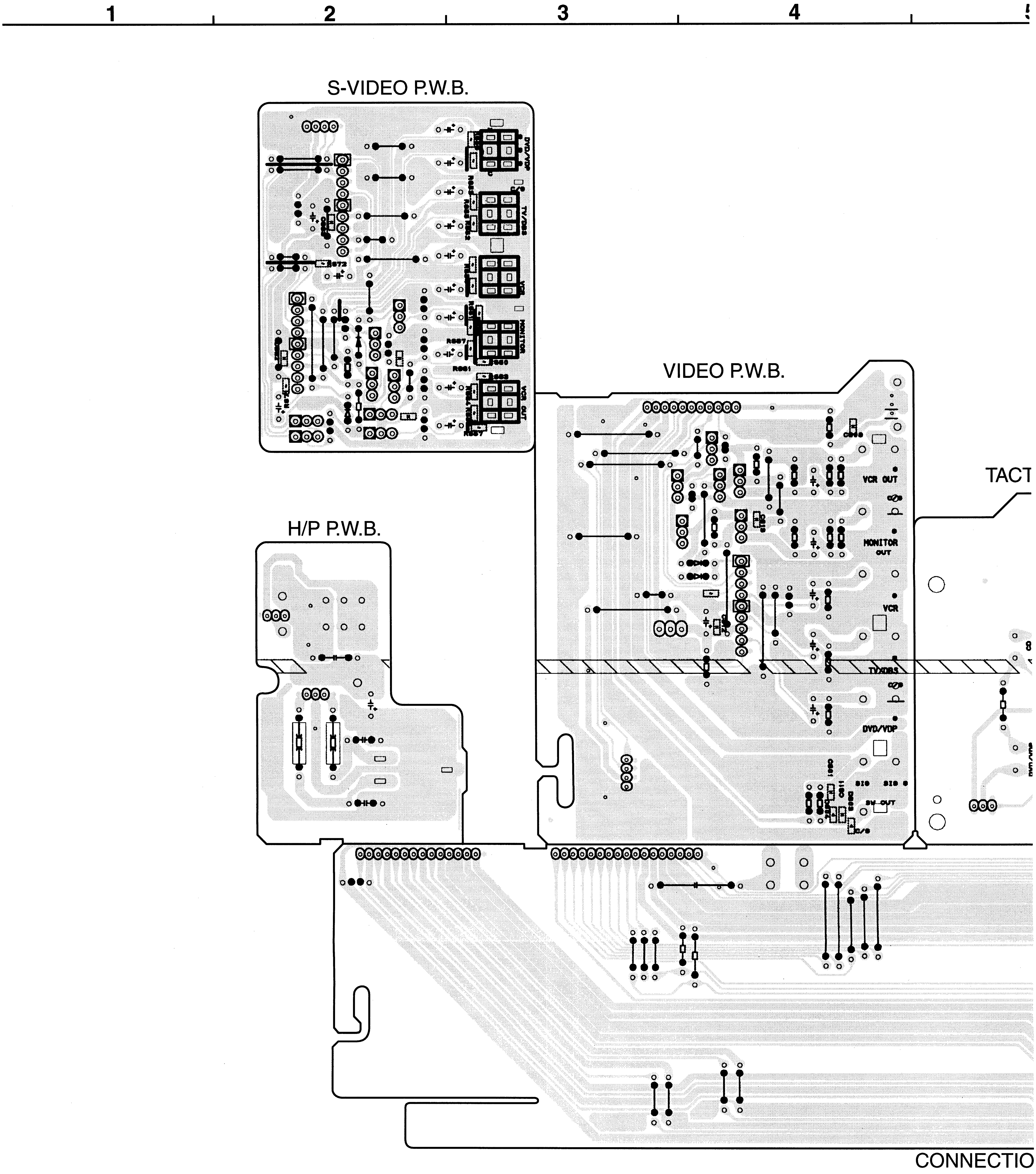
TUNER P.W.B.

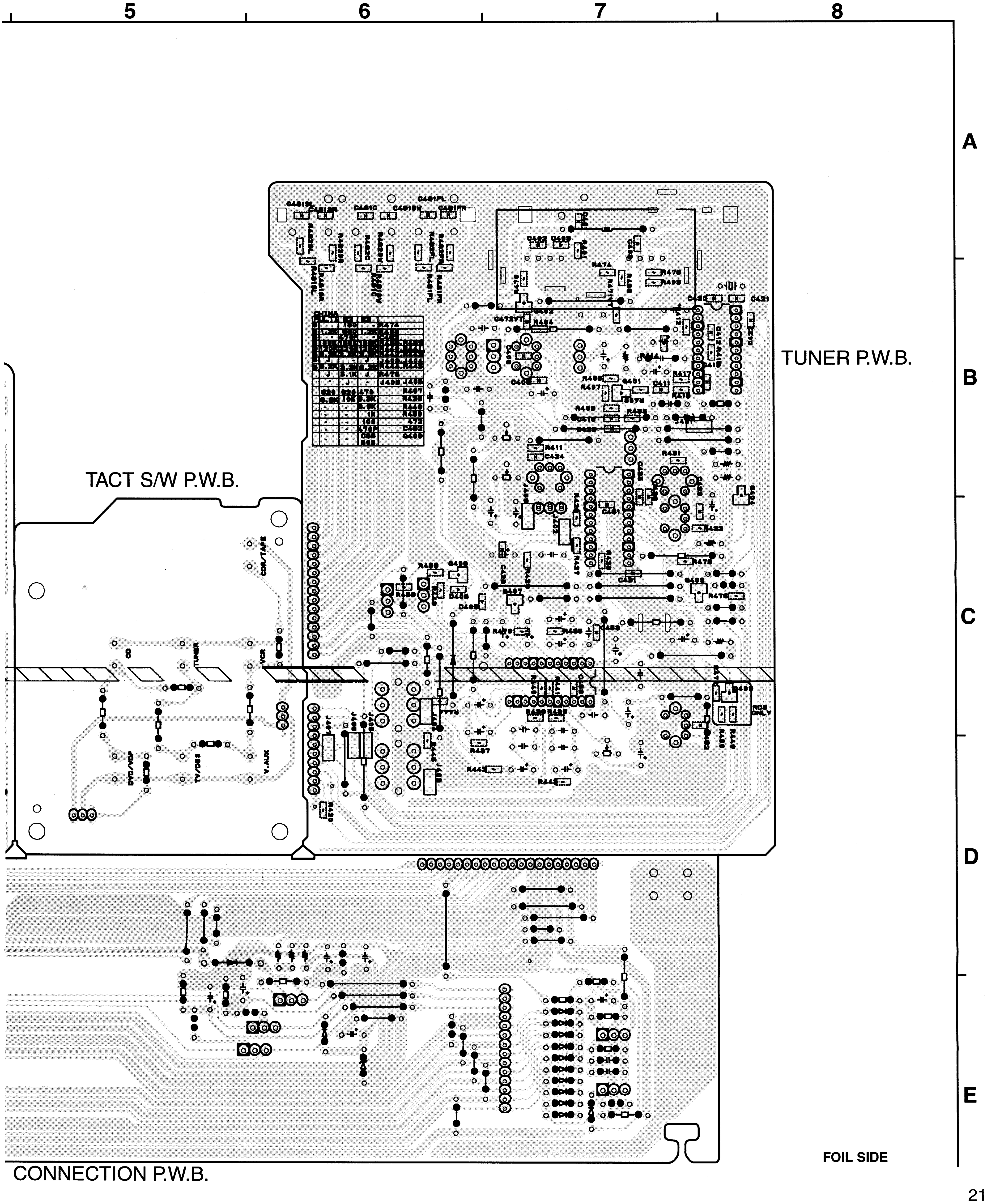
TACT S/W P.W.B.


7020-06100-201-0
TUNER B'D
AVR1602/1550N
7020-06100-601-0
TACT S/W B'D
IN
ICT
OP
ADJ
FI
L401
X1701
IC401
IC402
IC403
IC461
CN402
CN401
CN553
CN554
T401
T402
T403
T404
T405
T406
VR401
VR402
VR403
R-CH
L-CH
TUNED
BLACK
BLUE
SL
GND
SR
C
SW
FL
FR
TUNER R
TUNER L
DET-OUT
+15V
STEREO
T-MUTE
D-IN
CLK
DATA
CE
SUR MUTE
CNT MUTE
FRNT MUTE
MTZJ5V6
VCR
TUNER
CD
V.AUX
TV/DBS
DVD/VDP

CONNECTION P.

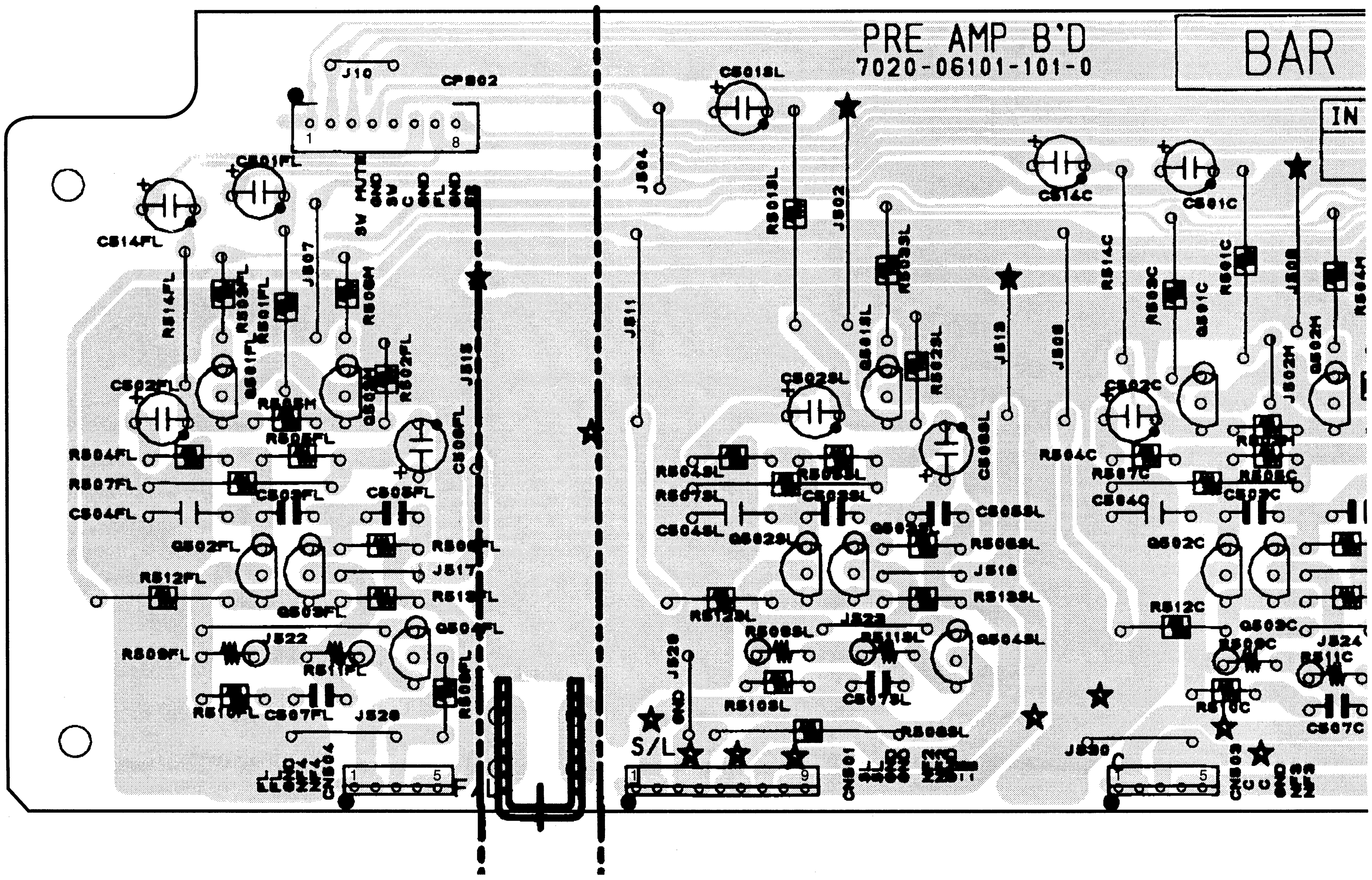

5
6
7
8
A
B
C
D
E
S-VIDEO P.W.B.
S-VIDEO UNIT
JK651
JK652
CN651
IC651
LA7952
IC652
VIDEO P.W.B.
P.W.B.
00-601-0
B'D
VCR OUT
MONITOR OUT
VCR
TV/DBS
DVD/VDP
JK601
JK602
JK603
IC601
LA7952
IC602
CN601
7020-06100-301-0
AVR1602/1550N
VIDEO B'D
SEL1
SEL2
+12V
VGND
CP651
H/P P.W.B.
SW901
CN901
JK901
H/P B'D
AVR1602/1550N
7020-06100-801-0
CN552
CN551
IN
ICT
OP
ADJ
FI
7020-06100-101-0
AVR1602/1550N
CONNECTION B'D
CARD CABLE
COMPONENT SIDE
NNECTION P.W.B.

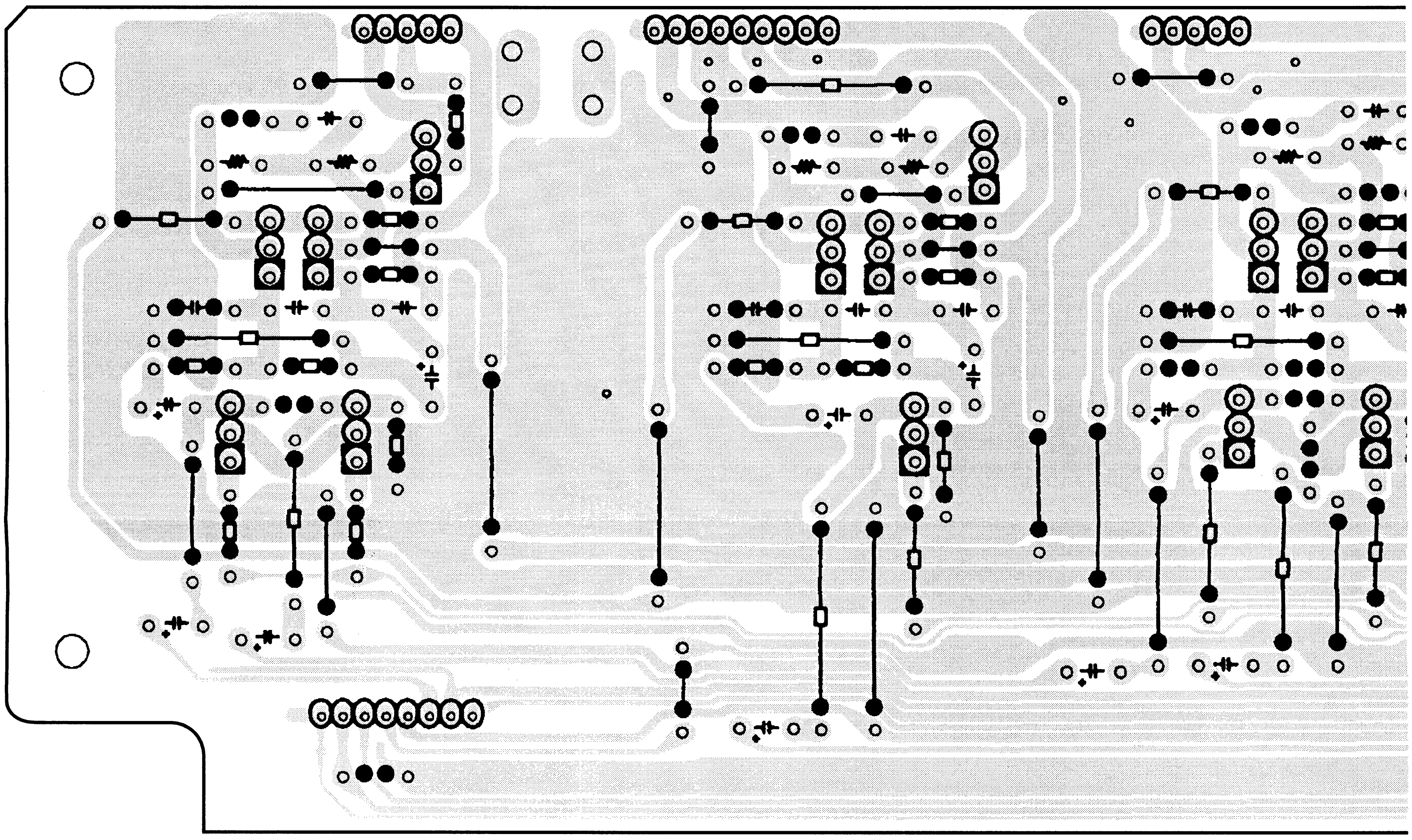

1
2
3
4
S-VIDEO P.W.B.
DVD/VDP
TV/DBS
VCR
MONITOR
VCR OUT
VIDEO P.W.B.
VCR OUT
MONITOR
OUT
VCR
TV/DBS
DVD/VDP
SV OUT
H/P P.W.B.
TACT
CONNECTIO

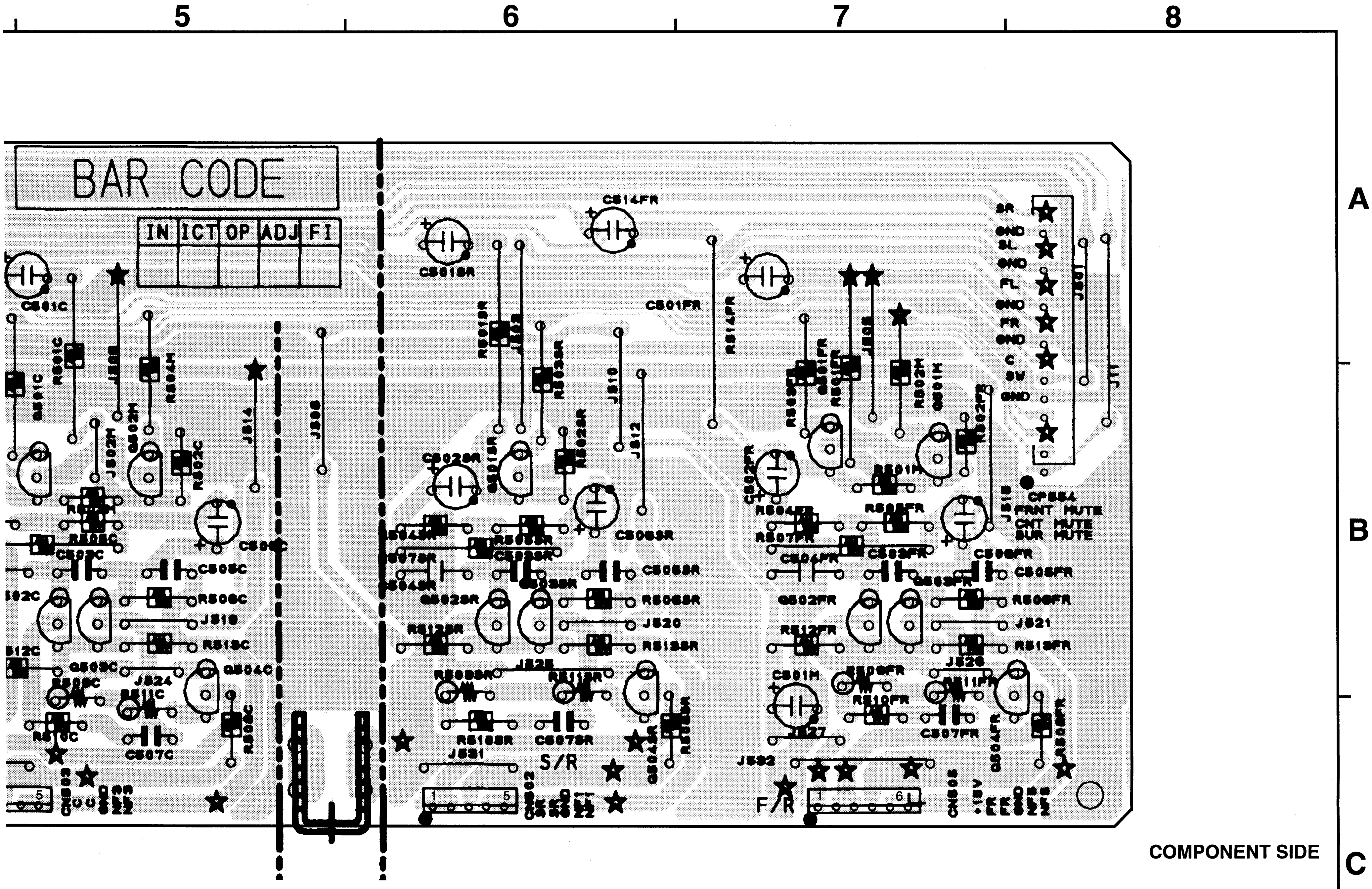

5
6
7
8
A
B
C
D
E
TUNER P.W.B.
TACT S/W P.W.B.
CONNECTION P.W.B.
FOIL SIDE
CHINA
CDR/TAPE
CD
TUNER
VCR
DVD/VDP
TV/DBS
V.AUX
RDS ONLY
R474
R478
J408
R407
R420
R448
R450
C482
Q408
C481FL
C481C
C481SW
C481FR
R411
C424
R431
R432
R475
R476
R437
R442
R443
R444
R447
R459
R469
R492
Q481
Q482
Q402
Q407
Q409
C421
C411
C431
C433
C434
C435
R436
R440
R441
R449

1 2 3 4

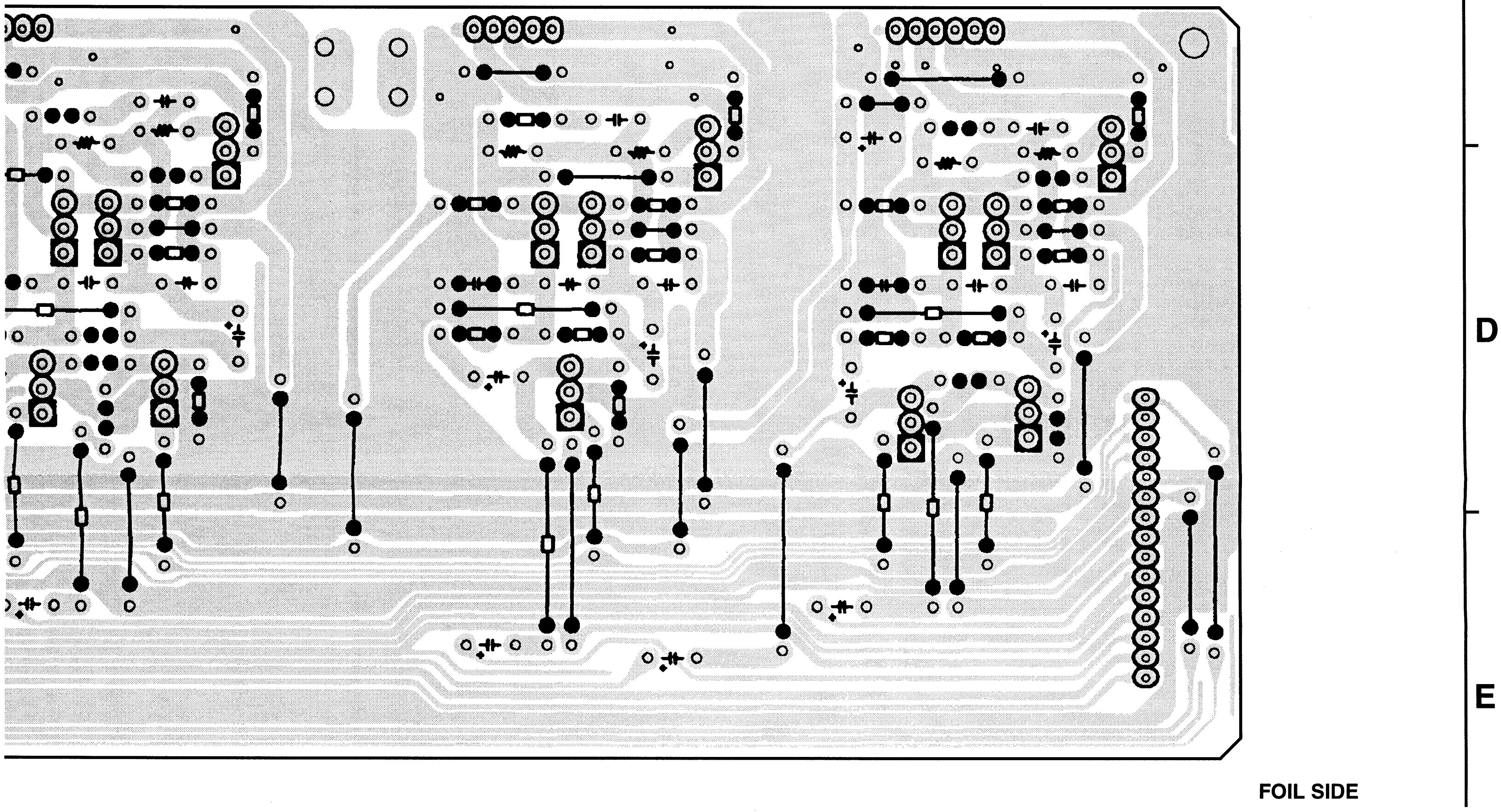
PRE AMP P.W.B. UNIT Ass'y


PRE AMP B'D
7020-06101-101-0
BAR
IN
J10
CP802
C501SL
C514C
C501C
C501FL
C514FL
R501SL
JS02
JS04
JS11
R503SL
R502SL
JS19
JS08
R514C
R503C
R501C
JS08
R504M
R514FL
R503FL
R501FL
JS07
R506M
R502FL
JS15
C502FL
C502SL
C502C
C506FL
C506SL
R504FL
R507FL
C504FL
C503FL
C505FL
R504SL
R507SL
C504SL
R504C
R507C
C504C
Q502FL
Q503FL
R512FL
R509FL
R510FL
C507FL
JS17
JS22
JS28
Q502SL
R512SL
R509SL
R510SL
C507SL
JS23
JS26
Q502C
R512C
R509C
R510C
C507C
JS24
JS30
CNS04
CNS01
CNS03
S/L
GND
SW
MUTE
1
5
8
9




5
6
7
8
A
B
C
BAR CODE
IN
ICT
OP
ADJ
FI
C501C
C514FR
C501SR
C501FR
R514FR
J508
J514
J513
J510
J512
J518
J501
J511
SR
GND
SL
GND
FL
GND
FR
GND
C
SW
GND
CP554
FRNT MUTE
CNT MUTE
SUR MUTE
C508FR
C505FR
R506FR
J521
R513FR
C505SR
R506SR
J520
R513SR
C505C
R506C
J519
R513C
Q502FR
Q502SR
Q504C
C501M
R512FR
R512SR
J525
J526
J524
J527
J531
J532
S/R
F/R
CN502
CN503
CN505
+15V

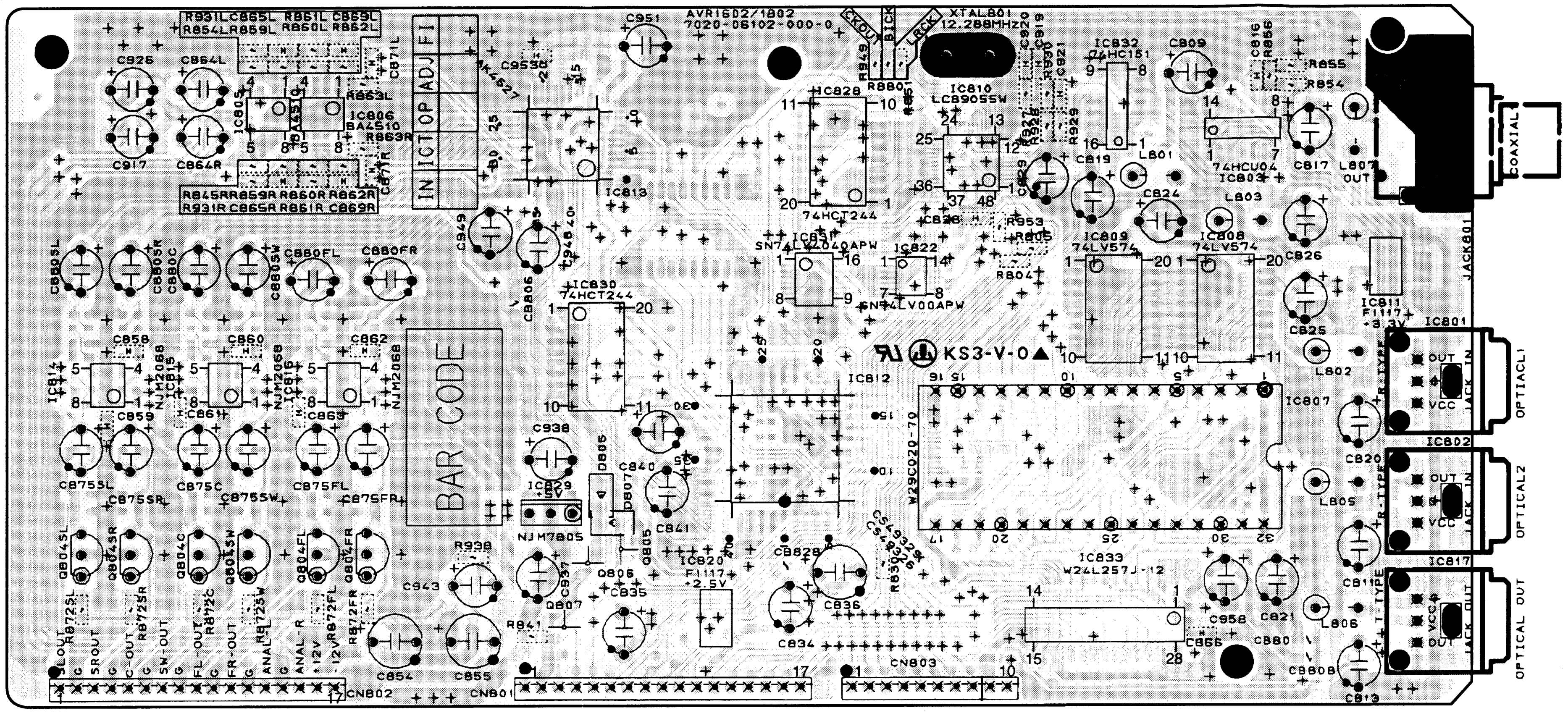
COMPONENT SIDE



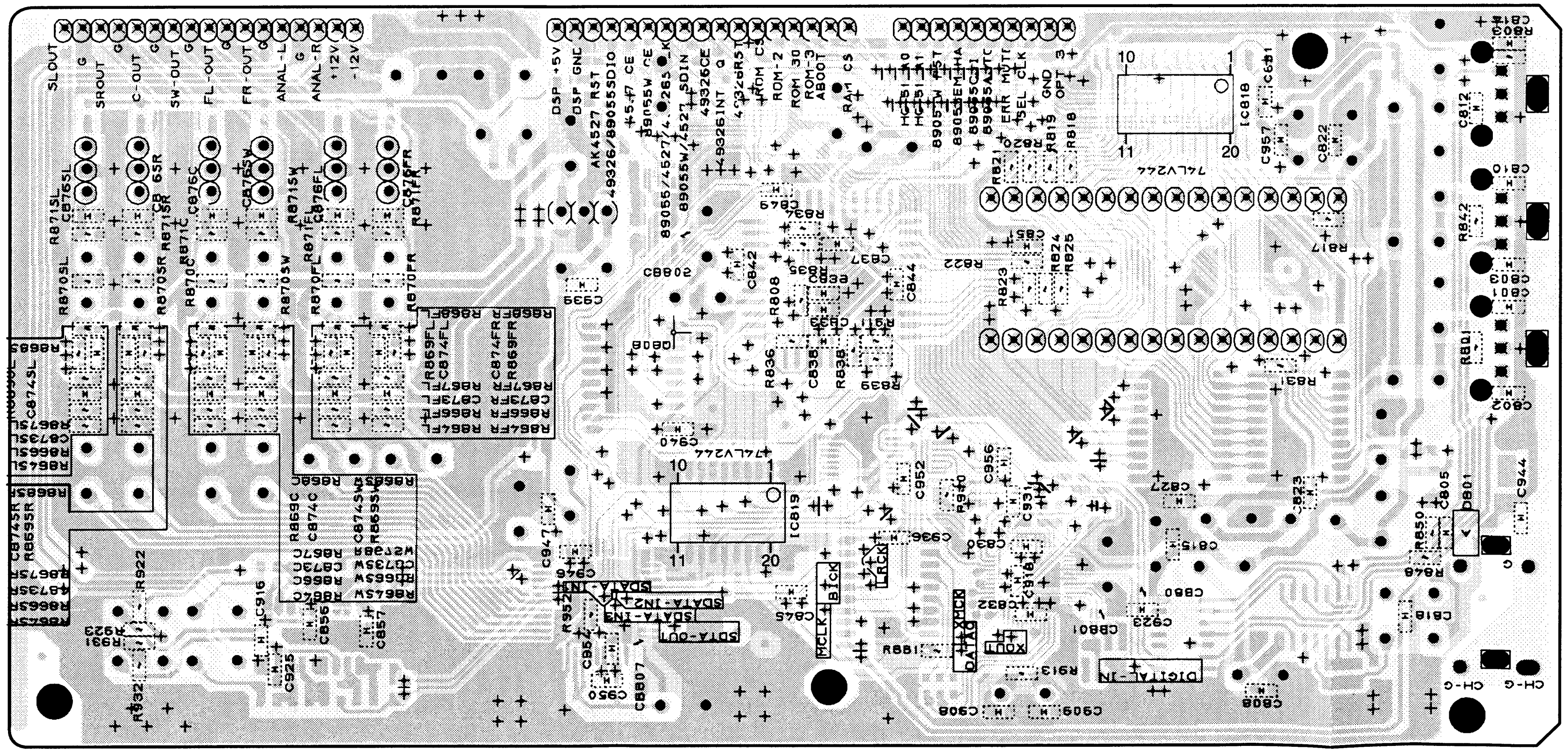
FOIL SIDE

1 2 3 4 5 6 7 8

DSP P.W.B. UNIT Ass'y


AVR1602/1802
7020-06102-000-0
XTAL801
12.288MHz
IC832 74HC151
IC828 74HCT244
IC810 LC89055W
IC805 BA4510
IC806 BA4510
AK4527
IC830 74HCT244
IC851 SN74LV4040APW
IC822 SN74LV00APW
IC809 74LV574
IC808 74LV574
IC803 74HCU04
IC811 F1117 -3.3V
IC812 W29C020-70
IC833 W24L257J-12
IC820 F1117 +2.5V
IC829 NJM7805
IC814 NJM2068
IC815 NJM2068
IC816 NJM2068
BAR CODE
KS3-V-0
JACK801
COAXIAL
IC801 OPTICAL1
IC802 OPTICAL2
IC817 OPTICAL OUT
CN801
CN802
CN803
IN ICT OP ADJ FI
SLOUT SROUT C-OUT SW-OUT FL-OUT FR-OUT ANAL-L ANAL-R +12V -12V

COMPONENT SIDE


SLOUT G SROUT G C-OUT G SW-OUT G FL-OUT G FR-OUT G ANAL-L G ANAL-R +12V -12V
DSP +5V
DSP GND
AK4527 RST
IC819 74LV244
IC818 74LV244
MCLK
BICK
LRCK
SDATA-IN1
SDATA-IN2
SDATA-IN3
SDATA-OUT
DIGITAL-IN
CH-G

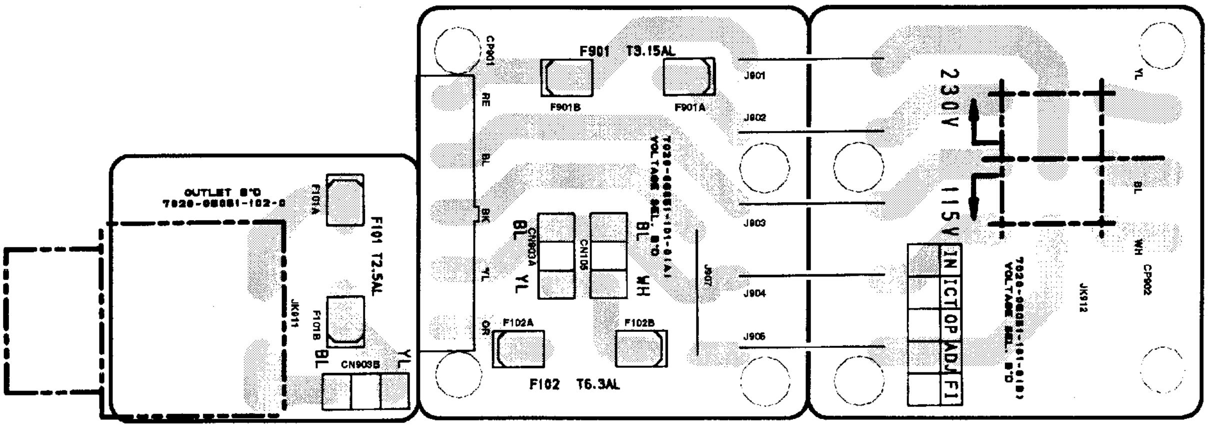
FOIL SIDE

A
B
C
D
E

1 2 3 4

VOLTAGE SEL P.W.B. UNIT Ass'y

A


OUTLET B'D
7020-06081-102-0
F101A
F101 T2.5AL
F101B
JK911
BL
CN903B
YL
CP901
RE
BL
BK
YL
OR
F901 T3.15AL
F901B
F901A
7020-06081-101-01A)
VOLTAGE SEL. B'D
BL
CN903A
YL
CN105
BL
WH
J907
F102A
F102B
F102 T6.3AL
J901
J902
J903
J904
J905
230V
115V
IN
ICT
OP
ADJ
F1
YL
BL
WH
CP902
JK912
7020-06081-101-01B)
VOLTAGE SEL. B'D

COMPONENT SIDE

B

C

D

E

NOTE FOR PARTS LIST

- Part indicated with the mark "◉" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING:

Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

● Resistors

Ex.:	RN	14K	2E	182	G	FR
	Type	Shape and performance	Power	Resistance	Allowable error	Others

RD : Carbon	2B : 1/8W	F : ±1%	P : Pulse-resistant type
RC : Composition	2E : 1/4W	G : ±2%	NL : Low noise type
RS : Metal oxide film	2H : 1/2W	J : ±5%	NB : Non-burning type
RW : Winding	3A : 1W	K : ±10%	FR : Fuse-resistor
RN : Metal film	3D : 2W	M : ±20%	F : Lead wire forming
RK : Metal mixture	3F : 3W		
	3H : 5W		

*** Resistance**

1 8 2 ⇒ 1800 ohm = 1.8 kohm
Indicates number of zeros after effective number.
2-digit effective number.

- Units: ohm

1 R 2 ⇒ 1.2 ohm
1-digit effective number.
2-digit effective number, decimal point indicated by R.

- Units: ohm

● Capacitors

Ex.:	CE	04W	1H	2R2	M	BP
	Type	Shape and performance	Dielectric strength	Capacity	Allowable error	Others

CE : Aluminum foil electrolytic	0J : 6.3V	F : ±1%	HS : High stability type
CA : Aluminum solid electrolytic	1A : 10V	G : ±2%	BP : Non-polar type
CS : Tantalum electrolytic	1C : 16V	J : ±5%	HR : Ripple-resistant type
CQ : Film	1E : 25V	K : ±10%	DL : For change and discharge
CK : Ceramic	1V : 35V	M : ±20%	HF : For assuring high requency
CC : Ceramic	1H : 50V	Z : +80% −20%	U : UL part
CP : Oil	2A : 100V		C : CSA part
CM : Mica	2B : 125V	P : +100% −0%	W : UL-CSA type
CF : Metallized	2C : 160V		F : Lead wire forming
CH : Metallized	2D : 200V	C : ±0.25pF	
	2E : 250V	D : ±0.5pF	
	2H : 500V	= : Others	
	2J : 630V		

*** Capacity (electrolyte only)**

2 2 2 ⇒ 2200µF
Indicates number of zeros after effective number.
2-digit effective number.

- Units: µF.

2 R 2 ⇒ 2.2µF
1-digit effective number.
2-digit effective number, decimal point indicated by R.

- Units: µF.

*** Capacity (except electrolyte)**

2 2 2 ⇒ 2200pF=0.0022µF
(More than 2)—Indicates number of zeros after effective number.
2-digit effective number.

- Units: pF.

2 2 1 ⇒ 220pF
(0 or 1)—— Indicates number of zeros after effective number.
2-digit effective number.

- Units: pF.

- When the dielectric strength is indicated in AC, "AC" is included after the dieelectric strength value.

PARTS LIST OF P.W.B. UNIT ASS'Y

MAIN P.W.B. ASS'Y

Note : The symbols in the column "Remarks" indicate the following destinations.
E3: U.S.A. & Canada model
EU: U.S.A. model (AVR-682)
E2: Europe model
E1: Asia model
E1C: China model
E1H: Hong Kong model
E1T: Taiwan R.O.C. model

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC101	963 0057 903	IC KIA7815AP	
IC102	963 0044 806	IC NJM7915FA	
IC103	960 0196 001	IC NJM7805FA	
IC104	963 0057 709	IC KIA7805AP	
IC105	960 0195 808	IC ICP-N15	
IC701	960 0174 308	IC TC9273N-007	
IC702,703	960 0179 701	IC NJM2068DD	
Q104C	960 0196 506	Transistor KSC1845F	
Q104FL,104FR	960 0196 506	Transistor KSC1845F	
Q104SL,104SR	960 0196 506	Transistor KSC1845F	
Q111-115	960 0196 904	Transistor DTC114YS	
Q116	960 0196 409	Transistor 2SC1740SR	
Q117	960 0196 904	Transistor DTC114YS	
Q151	960 0196 409	Transistor 2SC1740SR	
Q171	960 0005 202	Transistor KTC3198Y	
Q171A-171C	960 0196 302	Transistor KTA1268BL	
Q172-177	960 0005 202	Transistor KTC3198Y	
Q178	960 0005 105	Transistor KTA1266Y	
Q179	960 0189 005	Transistor KSA916Y	
Q180,181	960 0196 302	Transistor KTA1268BL	
D101-105	963 0020 309	Diode 1SS133T	
D121-126	963 0020 309	Diode 1SS133T	
D131A,131B	960 0197 107	Diode KBPC604	
D132	963 0020 309	Diode 1SS133T	
D133,134	963 0046 202	Diode MTZJ18B	
D135	963 0020 309	Diode 1SS133T	
D136	963 0058 504	Diode MTZJ11B	
D137	963 0020 309	Diode 1SS133T	
D138	963 0058 407	Diode 1N4007	
D141-146	963 0058 407	Diode 1N4007	
D148	963 0020 309	Diode 1SS133T	
D149,150	963 0058 407	Diode 1N4007	
D151	963 0020 309	Diode 1SS133T	
D152,153	963 0058 407	Diode 1N4007	
D154	963 0047 405	Diode MTZJ7.5B	
D157	963 0058 708	Diode MTZJ20B	
D158-160	963 0020 309	Diode 1SS133T	
RESISTORS GROUP			
R104C	244 2052 957	Metal film 5.6 kohm 1W	
R104FL,104FR	244 2052 957	Metal film 5.6 kohm 1W	
R104SL,104SR	244 2052 957	Metal film 5.6 kohm 1W	
R105C	244 2052 957	Metal film 5.6 kohm 1W	
R105FL,105FR	244 2052 957	Metal film 5.6 kohm 1W	
R105SL,105SR	244 2052 957	Metal film 5.6 kohm 1W	
R106C	244 2051 987	Metal film 4.7 ohm 1W	
R106FL,106FR	244 2051 987	Metal film 4.7 ohm 1W	
R106SL,106SR	244 2051 987	Metal film 4.7 ohm 1W	
R107C	244 2051 987	Metal film 4.7 ohm 1W	
R107FL,107FR	244 2051 987	Metal film 4.7 ohm 1W	
R107SL,107SR	244 2051 987	Metal film 4.7 ohm 1W	
R108C	244 2043 982	Metal film 0.22 ohm 1W	
R108FL,108FR	244 2043 982	Metal film 0.22 ohm 1W	
R108SL,108SR	244 2043 982	Metal film 0.22 ohm 1W	
R109C	244 2043 982	Metal film 0.22 ohm 1W	
R109FL,109FR	244 2043 982	Metal film 0.22 ohm 1W	
R109SL,109SR	244 2043 982	Metal film 0.22 ohm 1W	
R110C	244 2043 982	Metal film 0.22 ohm 1W	
R110FL,110FR	244 2043 982	Metal film 0.22 ohm 1W	
R110SL,110SR	244 2043 982	Metal film 0.22 ohm 1W	
R111C	244 2043 982	Metal film 0.22 ohm 1W	
R111FL,111FR	244 2043 982	Metal film 0.22 ohm 1W	
R111SL,111SR	244 2043 982	Metal film 0.22 ohm 1W	
R118C	244 2043 937	Metal oxide 10 ohm 1W(NB)	
R118FL,118FR	244 2043 937	Metal oxide 10 ohm 1W(NB)	
R118SL,118SR	244 2043 937	Metal oxide 10 ohm 1W(NB)	
R119C	244 2043 937	Metal oxide 10 ohm 1W(NB)	
R119FL,119FR	244 2043 937	Metal oxide 10 ohm 1W(NB)	
R119SL,119SR	244 2043 937	Metal oxide 10 ohm 1W(NB)	
R135,136	963 0045 203	Winding 0.1 ohm 5W	
R141,142	244 2043 982	Metal film 0.22 ohm 1W	
R148,149	244 2043 982	Metal film 0.22 ohm 1W	
R151	963 9003 343	Metal film 68 ohm 1/4W	
R154	963 0043 108	Metal film 2.2 Mohm 1/2W	for E3,EU
R155,156	963 9003 039	Metal film 1 ohm 1/4W	
R179	963 9003 055	Metal film 47 kohm 1/4W	
R181	244 2051 987	Metal film 4.7 ohm 1W	
R184	244 2043 937	Metal oxide 10 ohm 1W(NB)	
R185	963 9003 039	Metal film 1 ohm 1/4W	
R701L,701R	963 9004 339	Carbon chip 470 ohm 1/16W	
R702L,702R	963 9004 339	Carbon chip 470 ohm 1/16W	
R703L,703R	963 9004 339	Carbon chip 470 ohm 1/16W	
R704L,704R	963 9004 339	Carbon chip 470 ohm 1/16W	
R705L,705R	963 9004 339	Carbon chip 470 ohm 1/16W	
R706L,706R	963 9004 339	Carbon chip 470 ohm 1/16W	
R707L,707R	963 9004 339	Carbon chip 470 ohm 1/16W	
R710L,710R	963 9004 245	Carbon chip 2.2 Mohm 1/16W	
R711L,711R	963 9004 245	Carbon chip 2.2 Mohm 1/16W	
R712L,712R	963 9004 245	Carbon chip 2.2 Mohm 1/16W	
R713L,713R	963 9004 245	Carbon chip 2.2 Mohm 1/16W	
R714L,714R	963 9004 245	Carbon chip 2.2 Mohm 1/16W	
R715L,715R	963 9004 245	Carbon chip 2.2 Mohm 1/16W	
R716L,716R	963 9004 245	Carbon chip 2.2 Mohm 1/16W	
R725L,725R	960 9003 385	Carbon chip 100 ohm 1/16W	
R726L,726R	963 9004 083	Carbon chip 100 kohm 1/16W	
R728L,728R	963 9004 300	Carbon chip 39 kohm 1/16W	
R729L,729R	963 9003 385	Carbon chip 100 ohm 1/16W	
R730L,730R	963 9004 083	Carbon chip 100 kohm 1/16W	

Ref. No.	Part No.	Part Name	Remarks
R731L,731R	963 9004 300	Carbon chip 39 kohm 1/16W	
R732L,732R	963 9004 300	Carbon chip 39 kohm 1/16W	
R751L,751R	963 9004 083	Carbon chip 100 kohm 1/16W	
VR101-105	960 0091 601	Semi fixed resistor 1 kohm	
CAPACITORS GROUP			
C101C		Electrolytic 47uF/50V	
C101FL,101FR		Electrolytic 47uF/50V	
C101SL,101SR		Electrolytic 47uF/50V	
C102C		Electrolytic 10uF/35V	
C102FL,102FR		Electrolytic 10uF/35V	
C102SL,102SR		Electrolytic 10uF/35V	
C103C	963 9003 084	Ceramic 100pF/500V	
C103FL,103FR	963 9003 084	Ceramic 100pF/500V	
C103SL,103SR	963 9003 084	Ceramic 100pF/500V	
C104C	963 9003 084	Ceramic 100pF/500V	
C104FL,104FR	963 9003 084	Ceramic 100pF/500V	
C104SL,104SR	963 9003 084	Ceramic 100pF/500V	
C105C	960 9003 108	Ceramic 0.022uF/25V	
C105FL,105FR	960 9003 108	Ceramic 0.022uF/25V	
C105SL,105SR	960 9003 108	Ceramic 0.022uF/25V	
C107C	963 9003 097	Mylar film 0.1uF/250V	
C107FL,107FR	963 9003 097	Mylar film 0.1uF/250V	
C107SL,107SR	963 9003 097	Mylar film 0.1uF/250V	
C131-135	963 9003 097	Mylar film 0.1uF/250V	
C136,137	963 0087 203	Electrolytic 10000uF/63V	
C138		Electrolytic 1uF/50V	
C141-143	963 0021 900	Mylar film 0.047uF/100V	
C144	963 9003 110	Electrolytic 4700uF/35V	
C145	963 9003 123	Electrolytic 1000uF/35V	
C146		Electrolytic 1uF/50V	
C148		Electrolytic 1uF/50V	
C150-152	963 0021 900	Mylar film 0.047uF/100V	
C153	963 0021 104	Electrolytic 6800uF/16V	
C154		Electrolytic 10uF/35V	
C155	963 0020 202	Ceramic 0.1uF/50V	
C157		Electrolytic 1uF/50V	
C158	963 9003 136	Electrolytic 1000uF/25V	
C159		Electrolytic 1uF/50V	
C161		Electrolytic 10uF/35V	
C171		Electrolytic 100uF/10V	
C171A-171C	963 0020 202	Ceramic 0.1uF/50V	
C172,173		Electrolytic 220uF/6.3V	
C174		Electrolytic 10uF/35V	
C175		Electrolytic 4.7uF/50V	
C176,177		Electrolytic 1uF/50V	
C178	963 9003 149	Electrolytic 330uF/63V	
⚠C181	963 0076 104	Ceramic 4700pF/250V(AC)	
C182	963 9004 795	Electrolytic 10uF/100V	
C191-197		Ceramic 2200pF/16V	for E2
C198C	960 9006 202	Ceramic 0.01uF/50V	for E2

Ref. No.	Part No.	Part Name	Remarks	
C198FL,198FR	960 9006 202	Ceramic 0.01uF/50V	for E2	
C198SL,198SR	960 9006 202	Ceramic 0.01uF/50V	for E2	
C199FL,199FR	960 9006 202	Ceramic 0.01uF/50V	for E2	
C701L,701R	963 9004 575	Ceramic chip 100pF/50V	for E2	
C702L,702R	963 9004 575	Ceramic chip 100pF/50V	for E2	
C703L,703R	963 9004 575	Ceramic chip 100pF/50V	for E2	
C704L,704R	963 9004 575	Ceramic chip 100pF/50V	for E2	
C705L,705R	963 9004 575	Ceramic chip 100pF/50V	for E2	
C706L,706R	963 9004 575	Ceramic chip 100pF/50V	for E2	
C707L,707R	963 9004 575	Ceramic chip 100pF/50V	for E2	
C716L,716R		Electrolytic 10uF/35V		
C718L,718R		Electrolytic 10uF/35V		
C719L,719R		Electrolytic 10uF/35V		
C720L,720R	963 9003 152	Mylar film 0.068uF/100V		
C721L,721R	963 9003 152	Mylar film 0.068uF/100V		
C723L,723R		Electrolytic 10uF/35V		
C724L,724R	963 9004 698	Ceramic chip 0.01uF/50V		
C725,726	963 9004 698	Ceramic chip 0.01uF/50V		
C727,728		Electrolytic 10uF/35V		
OTHER PARTS GROUP				**Q'ty**
CN201	963 0046 309	8P connector base		1
CN202	963 0075 707	4P connector base		1
CN203	963 0046 309	8P connector base		1
CN701	960 0117 103	12P connector base		1
CN702	963 0046 600	11P connector base		
CP101	960 0197 505	2P connector base		1
CP102	960 0123 304	2P connector base	for E3,EU,E2,E1C	1
CP102	963 0066 208	3P connector base	for E1,E1H,E1T	1
CP103	963 0066 208	3P connector base		1
CP104	960 0128 804	6P connector base		1
CP105	960 0123 304	2P connector base	for E2,E1,E1 H,E1T	1
CP106	960 0123 207	3P connector base		1
CP303	963 0075 600	6P connector base		1
CP501	963 0046 901	9P connector base		1
CP502-504	963 0048 608	5P connector base		3
CP505	963 0049 500	6P connector base		1
CP553	963 0048 802	20P connector base		1
CP901	963 0048 909	3P connector base		1
CP931	960 0123 304	2P connector base	for E2,E1,E1C,E1H,E1T	1
⚠F101	960 0188 705	Fuse 125V-8A	for E3,EU	1
⚠F101	960 0142 602	Fuse 250V-T2.5A	for E2	1
F101A,101B	960 0005 804	Fuse clip	for E3,EU, E2	2
⚠F102	960 0188 705	Fuse 125V-8A	for E3,EU	1
⚠F102	963 0044 709	Fuse 250V-T3.15A	for E2,E1C	1
F102A,102B	960 0005 804	Fuse clip	for E3,EU,E2,E1C	2
GND101-103	960 9006 600	Terminal		3

Note : The symbols in the column "Remarks" indicate the following destinations.

E3: U.S.A. & Canada model	EU: U.S.A. model (AVR-682)
E2: Europe model	E1: Asia model
E1C: China model	E1H: Hong Kong model
E1T: Taiwan R.O.C. model	

Ref. No.	Part No.	Part Name	Remarks	Q'ty
JK103	960 0194 809	2P Terminal		1
⚠JK104	960 0181 508	AC outlet	for E3,EU	1
L101C	963 0049 005	Inductor 0.5uH		1
L101FL,101FR	963 0049 005	Inductor 0.5uH		2
L101SL,101SR	963 0049 005	Inductor 0.5uH		2
RLY101-104	960 0181 702	Relay G5PA-28 24V 5A		4
RLY105	963 0071 303	Relay RSB24S 24V 2A30VDC		1
RLY106	960 0181 605	Relay G5PA-1-8 12V 5A		1
TP101-105	960 0161 405	3P connector base		5
	—	Heat sink		1
	—	Heat sink		1
	963 0068 400	Condenser cover	for E2,E1,E1C,E1H,E1T	1
	963 0060 000	Fuse label F101	for E2	1
	963 0090 504	Fuse label F102	for E1C	1
⚠	960 0185 708	Sub trans.	for E3,EU	1
⚠	960 0185 711	Sub trans.	for E2	1
⚠	960 0185 737	Sub trans.	for E1,E1H,E1T	1
⚠	960 0185 724	Sub trans.	for E1C	1
	963 0018 007	Screw 3x8 CBTS(B)		3
	960 0158 308	4P Terminal		1
	963 0074 009	8P Terminal		1
	960 0194 702	4P pin jack		2
	960 0188 307	6P pin jack		1

CPU P.W.B. ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC201	963 0084 303	IC CXP740096-135Q	
IC202	963 0057 602	IC TDA7330BD	for E2
IC221	963 0080 201	IC KIC9164AN	
IC231	960 0179 604	IC M62446FP	
IC241	960 0179 701	IC NJM2068DD	
IC251	960 0179 701	IC NJM2068DD	
IC261	960 0179 701	IC NJM2068DD	
IC271	960 0179 701	IC NJM2068DD	
IC281	960 0179 701	IC NJM2068DD	
IC291	960 0179 701	IC NJM2068DD	
IC301	960 0180 004	IC LC75721E	
IC302	963 0074 504	IC BU2090F	
RMC301	960 0181 100	Remote sensor NJL64H380A	
Q201	963 0075 202	Transistor DTC144EK	
Q202	963 0045 902	Transistor 2SC2412K	
Q203	963 0075 309	Transistor DTA114ES	
Q204,205	960 0196 603	Transistor KTC2874B	
Q231	963 0075 309	Transistor DTA114ES	
Q232	963 0075 503	Transistor DTC144ES	
Q251,252	960 0196 807	FET 2SK117Y	
Q291C	960 0196 807	FET 2SK117Y	
Q291FL,291FR	960 0196 807	FET 2SK117Y	
Q291SW	960 0196 807	FET 2SK117Y	
Q294	963 0058 203	Transistor DTA114EK	
Q295	963 0075 202	Transistor DTC144EK	
Q296	963 0058 203	Transistor DTA114EK	
Q297	963 0075 202	Transistor DTC144EK	
Q310	963 0075 008	Transistor DTA144EK	
Q311	963 0075 202	Transistor DTC144EK	
Q312	963 0075 008	Transistor DTA144EK	
Q313	963 0075 202	Transistor DTC144EK	
Q314	963 0075 008	Transistor DTA144EK	
Q315	963 0075 202	Transistor DTC144EK	
D201	960 0197 000	Diode KDS160	
D202	963 0058 407	Diode 1N4007	
D203	963 0020 309	Diode 1SS133	
D204,205	960 0197 000	Diode KDS160	
D206	963 0020 309	Diode 1SS133	for E2
D251,252	963 0020 309	Diode 1SS133	
D261	963 0058 407	Diode 1N4007	
D291-294	960 0197 000	Diode KDS160	
D302-304	963 0020 309	Diode 1SS133	
D305	960 0197 000	Diode KDS160	
D308,309	960 0197 000	Diode KDS160	

Ref. No.	Part No.	Part Name	Remarks
ZD201	963 0047 502	Zener diode MTZJ3.3B	
ZD271,272	960 0222 603	Zener diode MTZJ7.5A	
ZD301	960 0095 801	Zener diode MTZJ6.8B	
ZD306,307	960 0095 607	Zener diode MTZJ5.6B	
LED301-304	960 0197 204	LED PI5-RD/HL50RDRF4T	
LED306-309	960 0197 204	LED PI5-RD/HL50RDRF4T	
RESISTORS GROUP			
R202	963 9003 398	Carbon chip 1 kohm 1/16W	
R203,204	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R205	963 9004 070	Carbon chip 10 kohm 1/16W	
R206	963 9004 232	Carbon chip 220 kohm 1/16W	
R209	963 9004 070	Carbon chip 10 kohm 1/16W	
R211	963 9004 070	Carbon chip 10 kohm 1/16W	
R212	963 9003 398	Carbon chip 1 kohm 1/16W	
R213-215	963 9004 122	Carbon chip 12 kohm 1/16W	
R216	963 9004 070	Carbon chip 10 kohm 1/16W	for E3,EU,E2
R217	963 9004 070	Carbon chip 10 kohm 1/16W	for E3,EU
R218	963 9004 070	Carbon chip 10 kohm 1/16W	for E1,E1C,E1H,E1T
R218,219	963 9004 177	Carbon chip 18 kohm 1/16W	for E2
R220	963 9004 070	Carbon chip 10 kohm 1/16W	
R223,224	963 9003 372	Carbon chip 0 ohm 1/16W	for E3,EU,E1,E1C,E1H,E1T
R223,224	963 9004 070	Carbon chip 10 kohm 1/16W	for E2
R225	963 9004 245	Carbon chip 2.2 Mohm 1/16W	for E2
R226	963 9004 070	Carbon chip 10 kohm 1/16W	
R227	963 9003 398	Carbon chip 1 kohm 1/16W	
R228	963 9004 368	Carbon chip 470 kohm 1/16W	
R230	963 9004 229	Carbon chip 22 kohm 1/16W	
R231,232	244 2051 961	Metal film 100 ohm 1W	
R236	963 9004 216	Carbon chip 2.2 kohm 1/16W	
R237	963 9004 070	Carbon chip 10 kohm 1/16W	
R238	963 9004 216	Carbon chip 2.2 kohm 1/16W	
R241-248	963 9004 339	Carbon chip 470 ohm 1/16W	
R252	963 9004 449	Carbon chip 6.8 kohm 1/16W	
R253	963 9004 834	Carbon chip 5.6 kohm 1/16W	
R254	963 9004 481	Carbon chip 8.2 kohm 1/16W	
R255	963 9003 385	Carbon chip 100 ohm 1/16W	
R256	963 9004 083	Carbon chip 100 kohm 1/16W	
R258	963 9004 070	Carbon chip 10 kohm 1/16W	
R259	963 9004 216	Carbon chip 2.2 kohm 1/16W	
R261L,261R	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R262L,262R	963 9004 151	Carbon chip 15 kohm 1/16W	
R263L,263R	963 9004 151	Carbon chip 15 kohm 1/16W	
R264L,264R	963 9003 385	Carbon chip 100 ohm 1/16W	
R265L,265R	963 9004 083	Carbon chip 100 kohm 1/16W	
R266L,266R	963 9004 410	Carbon chip 6.2 kohm 1/16W	
R271	244 2051 958	Metal film 220 ohm 1W	
R273	963 9005 325	Carbon chip 2.7 kohm 1/16W	
R274	244 2051 958	Metal film 220 ohm 1W	
R282-284	963 9003 385	Carbon chip 100 ohm 1/16W	

Ref. No.	Part No.	Part Name	Remarks
R286C	963 9004 232	Carbon chip 220 kohm 1/16W	
R286FL,286FR	963 9004 232	Carbon chip 220 kohm 1/16W	
R286SL,286SR	963 9004 232	Carbon chip 220 kohm 1/16W	
R286SW	963 9004 232	Carbon chip 220 kohm 1/16W	
R292C	963 9003 385	Carbon chip 100 ohm 1/16W	
R292FL,292FR	963 9003 385	Carbon chip 100 ohm 1/16W	
R292SL,292SR	963 9003 385	Carbon chip 100 ohm 1/16W	
R292SW	963 9003 385	Carbon chip 100 ohm 1/16W	
R293C	963 9004 355	Carbon chip 47 kohm 1/16W	
R293FL,293FR	963 9004 355	Carbon chip 47 kohm 1/16W	
R293SL,293SR	963 9004 355	Carbon chip 47 kohm 1/16W	
R293SW	963 9004 355	Carbon chip 47 kohm 1/16W	
R294C	963 9004 481	Carbon chip 8.2 kohm 1/16W	
R294FL,294FR	963 9004 371	Carbon chip 5.1 kohm 1/16W	
R294SW	963 9005 338	Carbon chip 16 kohm 1/10W	
R295SW	963 9004 355	Carbon chip 47 kohm 1/16W	
R296C	963 9005 341	Carbon chip 13 kohm 1/10W	
R296FL,296FR	963 9004 834	Carbon chip 5.6 kohm 1/16W	
R296SL,296SR	963 9005 341	Carbon chip 13 kohm 1/10W	
R296SW	963 9004 122	Carbon chip 12 kohm 1/16W	
R297C	963 9004 216	Carbon chip 2.2 kohm 1/16W	
R297FL,297FR	963 9003 398	Carbon chip 1 kohm 1/16W	
R297SL,297SR	963 9004 216	Carbon chip 2.2 kohm 1/16W	
R297SW	963 9005 008	Carbon chip 620 ohm 1/16W	
R298SW	963 9004 083	Carbon chip 100 kohm 1/16W	
R299C	963 9004 339	Carbon chip 470 ohm 1/16W	
R299FL,299FR	963 9004 339	Carbon chip 470 ohm 1/16W	
R299SL,299SR	963 9004 339	Carbon chip 470 ohm 1/16W	
R299SW	963 9003 398	Carbon chip 1 kohm 1/16W	
R301-304	963 9004 436	Carbon chip 680 ohm 1/16W	
R306-309	963 9004 436	Carbon chip 680 ohm 1/16W	
R315	963 9004 070	Carbon chip 10 kohm 1/16W	
R332	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R381	963 9004 465	Carbon chip 75 ohm 1/16W	
R382,383	963 9004 339	Carbon chip 470 ohm 1/16W	
R384,385	963 9004 245	Carbon chip 2.2 Mohm 1/16W	
RG01	963 9004 397	Carbon chip 56 kohm 1/16W	
RP01-38	963 9004 397	Carbon chip 56 kohm 1/16W	
CAPACITORS GROUP			
BC201	963 0061 504	Electric double layer 8200uF/5.5V	
C201	963 9004 546	Ceramic 0.01uF/16V	
C202	963 9004 711	Ceramic chip 0.1uF/50V	
C203	963 9004 698	Ceramic chip 0.01uF/50V	
C204		Electrolytic 4.7uF/50V	
C205	963 9004 711	Ceramic chip 0.1uF/50V	
C206		Electrolytic 47uF/10V	for E2
C207	963 9004 546	Ceramic 0.01uF/16V	for E2

Ref. No.	Part No.	Part Name	Remarks
C208	963 9005 354	Ceramic chip 270pF/50V	for E2
C209		Electrolytic 10uF/35V	for E2
C210	963 9004 698	Ceramic chip 0.01uF/50V	for E2
C211,212	963 9004 614	Ceramic chip 27pF/50V	for E2
C213		Electrolytic 0.1uF/50V	
C214		Electrolytic 1uF/50V	
C219-226	963 9004 753	Ceramic chip 0.047uF/50V	
C231		Electrolytic 47uF/25V	
C233		Electrolytic 47uF/25V	
C236		Electrolytic 47uF/25V	
C238		Electrolytic 47uF/25V	
C241-246	963 9004 753	Ceramic chip 0.047uF/50V	
C251	963 9004 575	Ceramic chip 100pF/50V	
C252	963 9004 643	Ceramic chip 47pF/50V	
C253		Electrolytic 10uF/35V	
C261-268	963 9004 520	Ceramic 100pF/50V	
C261L,261R	963 9004 575	Ceramic chip 100pF/50V	
C262L,262R	963 9004 627	Ceramic chip 33pF/50V	
C263L,263R		Electrolytic 10uF/35V	
C271		Electrolytic 47uF/10V	
C272		Electrolytic 1uF/50V	
C273		Electrolytic 47uF/10V	
C274		Electrolytic 0.33uF/50V	
C275	963 9005 367	Ceramic chip 0.015uF/50V	
C276,277		Electrolytic 3.3uF/50V	
C278		Electrolytic 0.33uF/50V	
C279	963 9005 367	Ceramic chip 0.015uF/50V	
C280,281	963 9005 370	Ceramic chip 8200pF/50V	
C282	963 9004 575	Ceramic chip 100pF/50V	
C285BL,285BR		Electrolytic 4.7uF/50V	
C285C		Electrolytic 4.7uF/50V	
C285FL,285FR		Electrolytic 4.7uF/50V	
C285SL,285SR		Electrolytic 4.7uF/50V	
C285SW		Electrolytic 4.7uF/50V	
C292C		Electrolytic 4.7uF/50V	
C292FL,292FR		Electrolytic 10uF/35V	
C292SL,292SR		Electrolytic 10uF/35V	
C292SW		Electrolytic 4.7uF/50V	
C294C	963 9005 383	Ceramic chip 2700pF/50V	
C294FL,294FR	963 9005 396	Ceramic chip 4700pF/50V	
C295C	963 9004 575	Ceramic chip 100pF/50V	
C295FL,295FR	963 9004 672	Ceramic chip 680pF/50V	
C296C	963 9004 630	Ceramic chip 39pF/50V	
C296FL,296FR	963 9005 422	Ceramic chip 82pF/50V	
C296SL,296SR	963 9004 630	Ceramic chip 39pF/50V	
C296SW	963 9004 575	Ceramic chip 100pF/50V	
C297SW		Electrolytic 4.7uF/50V	
C301		Electrolytic 10uF/50V	
C302	963 9004 753	Ceramic chip 0.047uF/50V	
C303		Electrolytic 47uF/10V	
C304	963 9004 737	Ceramic chip 0.022uF/25V	
C305		Electrolytic 47uF/16V	
C306	963 9004 766	Mylar film 0.1uF/100V	
C307		Electrolytic 1uF/50V	
C308,309	963 0021 900	Mylar film 0.047uF/100V	
C310		Electrolytic 1uF/50V	
C311	963 9005 406	Ceramic chip 30pF/50V	
C312		Electrolytic 47uF/16V	
C313	963 9005 419	Mylar film 0.047uF/63V	
C316,317	963 9004 698	Ceramic chip 0.01uF/50V	
C321	963 9004 685	Ceramic chip 1000pF/50V	
C322	963 9004 575	Ceramic chip 100pF/50V	
C324	963 9004 575	Ceramic chip 100pF/50V	
C333	963 9004 575	Ceramic chip 100pF/50V	
C381		Electrolytic 47uF/10V	
C382,383	963 9004 575	Ceramic chip 100pF/50V	
C384,385		Electrolytic 1uF/50V	

OTHER PARTS GROUP				Q'ty
BD201,202	963 0053 800	Beads inductor		2
CN105	963 0089 405	2P connector cord	for E2	1
CN302	963 0087 300	3P connector cord		1
CN303	963 0090 407	6P connector cord		1
CP201	963 0046 804	8P connector base		1
CP202	963 0075 804	4P connector base		1
CP203	963 0046 804	8P connector base		1
CP301A	963 0075 901	15P FPC base		1
CP301B	960 0217 524	15P FPC base		1
CP303	963 0049 102	3P connector base		1
CP401	963 0047 007	10P connector base		1
CP402	963 0049 209	15P connector base		1
CP551	960 0123 003	14P connector base		1
CP552	963 0049 306	17P connector base		1
CP601	963 0047 104	11P connector base		1
CP701	960 0116 803	12P connector base		1
CP702	963 0047 104	11P connector base		1
CP801,802	963 0049 306	17P connector base		2
CP803	963 0046 804	8P connector base		1
FL301	960 0180 509	FLT 16-ST-42GNK		1
G301	—	1P lug wire L60 BK		1
JK301	963 0067 508	3P pin jack		1
L301	960 0128 008	Inductor 100uH		1
L302	960 0010 307	Inductor 10uH		1
SW301B,301C	963 0045 708	Tact switch		2
SW302A-302C	963 0045 708	Tact switch		3
SW303A-303C	963 0045 708	Tact switch		3

Note : The symbols in the column "Remarks" indicate the following destinations.
E3: U.S.A. & Canada model — EU: U.S.A. model (AVR-682)
E2: Europe model — E1: Asia model
E1C: China model — E1H: Hong Kong model
E1T: Taiwan R.O.C. model

Ref. No.	Part No.	Part Name	Remarks	Q'ty
SW304B,304C	963 0045 708	Tact switch		2
SW305B,305C	963 0045 708	Tact switch		2
SW306B,306C	963 0045 708	Tact switch		2
SW307B,307C	963 0045 708	Tact switch		2
SW308B,308C	963 0045 708	Tact switch		2
SW309B,309C	963 0045 708	Tact switch		2
SW310B,310C	963 0045 708	Tact switch		2
SW311B,311C	963 0045 708	Tact switch		2
VEC301	960 0181 207	Encoder EC16B2420431		1
X201	960 0181 003	Ceramic resonator CST12.0MTW		1
X202	960 0091 818	Crystal 4.332MHz	for E2	1
	960 0184 408	FLT holder		1
⚠	960 0143 203	AC outlet	for E2	1
	—	Wire clamp	for E3,EU,E1,E1C,E1H,E1T	2

CNT P.W.B. ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC401	963 0043 700	IC LC72131	
IC402	963 0043 904	IC LA1266	
IC403	963 0044 000	IC LA3401	
IC601	960 0180 101	IC LA7952	
IC602	963 0074 902	IC NJM7812FA	
IC651,652	960 0180 101	IC LA7952	for E3,EU,E1,E1C,E1H,E1T
Q401	963 0058 300	Transistor KTC3880S	
Q402	963 0075 105	Transistor DTC114EK	
Q403,404	963 0058 203	Transistor DTA114EK	
Q405,406	960 0196 603	Transistor KTC2874B	
Q407	963 0024 208	Transistor DTC114YK	
Q408	963 0058 203	Transistor DTA114EK	
Q409	963 0058 300	Transistor KTC3880S	for E2
Q551	960 0196 700	Transistor KTC3200BL	
Q552	960 0196 302	Transistor KTA1268BL	
Q553-555	963 0075 309	Transistor DTA114ES	
Q601,602	960 0096 800	Transistor 2SC3199Y	
Q603,604	960 0196 904	Transistor DTC114YS	
Q605,606	963 0075 406	Transistor DTC114TS	
Q651,652	960 0096 800	Transistor 2SC3199Y	for E3,EU,E1,E1C,E1H,E1T
Q653,654	960 0196 904	Transistor DTC114YS	for E3,EU,E1,E1C,E1H,E1T
Q655,656	960 0096 800	Transistor 2SC3199Y	for E3,EU,E1,E1C,E1H,E1T
Q657,658	960 0196 904	Transistor DTC114YS	for E3,EU,E1,E1C,E1H,E1T
D403	960 0197 000	Diode KDS160	
D404	963 0020 309	Diode 1SS133	
D405,406	960 0197 000	Diode KDS160	
D551-561	963 0020 309	Diode 1SS133	
D562	963 0058 407	Diode 1N4007	
D564	960 0095 607	Zener diode MTZJ5.6B	
D565	963 0020 309	Diode 1SS133	
D601,602	963 0020 309	Diode 1SS133	
D651,652	963 0020 309	Diode 1SS133	for E3,EU,E1,E1C,E1H,E1T
ZD401	960 0095 500	Zener diode MTZJ5.1B	
RESISTORS GROUP			
R401	963 9004 821	Carbon chip 10 ohm 1/16W	
R403	963 9004 339	Carbon chip 470 ohm 1/16W	
R404	963 9004 083	Carbon chip 100 kohm 1/16W	
R405	960 9003 807	Metal film 100 ohm 1/4W	
R406	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R407	963 9004 339	Carbon chip 470 ohm 1/16W	for E3,EU
R407	963 9005 008	Carbon chip 620 ohm 1/16W	for E2,E1,E1C,E1H,E1T
R408	963 9004 119	Carbon chip 1.2 kohm 1/16W	for E3,EU,E1,E1C,E1H,E1T

Ref. No.	Part No.	Part Name	Remarks
R408	963 9004 436	Carbon chip 680 ohm 1/16W	for E2
R409	963 9004 339	Carbon chip 470 ohm 1/16W	
R411	963 9005 011	Carbon chip 68 kohm 1/16W	
R412	963 9004 834	Carbon chip 5.6 kohm 1/16W	
R413	960 9006 503	Metal film 220 ohm 1/4W	
R414	963 9004 216	Carbon chip 2.2 kohm 1/16W	
R415	963 9003 398	Carbon chip 1 kohm 1/16W	
R416	963 9005 024	Metal film 680 ohm 1/4W	
R417	963 9003 398	Carbon chip 1 kohm 1/16W	
R418	963 9004 274	Carbon chip 33 kohm 1/16W	
R420	963 9004 847	Carbon chip 3.3 kohm 1/16W	
R426,427	963 9004 070	Carbon chip 10 kohm 1/16W	
R428	963 9004 070	Carbon chip 10 kohm 1/16W	for E2
R428	963 9004 847	Carbon chip 3.3 kohm 1/16W	for E3,EU
R428	963 9004 449	Carbon chip 6.8 kohm 1/16W	for E1,E1C,E1H,E1T
R429	963 9004 850	Carbon chip 82 ohm 1/16W	
R430	960 9003 807	Metal film 100 ohm 1/4W	
R431	963 9004 371	Carbon chip 5.1 kohm 1/16W	
R432	963 9004 070	Carbon chip 10 kohm 1/16W	
R434	960 9003 807	Metal film 100 ohm 1/4W	
R435	963 9004 847	Carbon chip 3.3 kohm 1/16W	
R437	963 9004 083	Carbon chip 100 kohm 1/16W	
R438,439	963 9004 083	Carbon chip 100 kohm 1/16W	for E3,EU,E1,E1C,E1H,E1T
R438,439	963 9004 164	Carbon chip 150 kohm 1/16W	for E2
R440,441	963 9004 863	Carbon chip 120 kohm 1/16W	for E3,EU,E1,E1C,E1H,E1T
R440,441	963 9004 232	Carbon chip 220 kohm 1/16W	for E2
R442,443	963 9004 216	Carbon chip 2.2 kohm 1/16W	for E2
R442,443	963 9004 847	Carbon chip 3.3 kohm 1/16W	for E3,EU,E1,E1C,E1H,E1T
R444,445	963 9004 847	Carbon chip 3.3 kohm 1/16W	for E2
R444,445	963 9004 481	Carbon chip 8.2 kohm 1/16W	for E3,EU,E1,E1C,E1H,E1T
R448	963 9004 216	Carbon chip 2.2 kohm 1/16W	
R449	963 9005 037	Carbon chip 3.9 kohm 1/16W	for E2
R450	963 9003 398	Carbon chip 1 kohm 1/16W	for E2
R455	963 9004 876	Carbon chip 330 ohm 1/16W	
R456	963 9003 385	Carbon chip 100 ohm 1/16W	
R458,459	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R470	963 9003 398	Carbon chip 1 kohm 1/16W	
R471VT	963 9004 203	Carbon chip 220 ohm 1/16W	
R472	963 9003 385	Carbon chip 100 ohm 1/16W	for E2
R474	963 9004 889	Carbon chip 180 ohm 1/16W	for E2
R475	963 9004 122	Carbon chip 12 kohm 1/16W	
R476	963 9004 397	Carbon chip 56 kohm 1/16W	
R478	963 9004 070	Carbon chip 10 kohm 1/16W	
R479	963 9004 083	Carbon chip 100 kohm 1/16W	
R481C	963 9004 245	Carbon chip 2.2 Mohm 1/16W	
R481FL,481FR	963 9004 245	Carbon chip 2.2 Mohm 1/16W	
R481SL,481SR	963 9004 245	Carbon chip 2.2 Mohm 1/16W	
R481SW	963 9004 245	Carbon chip 2.2 Mohm 1/16W	
R482C	963 9003 385	Carbon chip 100 ohm 1/16W	
R482FL,482FR	963 9003 385	Carbon chip 100 ohm 1/16W	
R482SL,482SR	963 9003 385	Carbon chip 100 ohm 1/16W	
R482SW	963 9003 385	Carbon chip 100 ohm 1/16W	

Ref. No.	Part No.	Part Name	Remarks
R559	244 2055 996	Metal film 1.2 kohm 1W	
R565	244 2055 996	Metal film 1.2 kohm 1W	
R570	244 2055 996	Metal film 1.2 kohm 1W	
R651-656	963 9004 465	Carbon chip 75 ohm 1/16W	for E3,EU,E1,E1C,E1H,E1T
R657	963 9004 423	Carbon chip 68 ohm 1/10W	for E3,EU,E1,E1C,E1H,E1T
R658	963 9004 070	Carbon chip 10 kohm 1/16W	for E3,EU,E1,E1C,E1H,E1T
R660	963 9004 423	Carbon chip 68 ohm 1/10W	for E3,EU,E1,E1C,E1H,E1T
R661	963 9004 070	Carbon chip 10 kohm 1/16W	for E3,EU,E1,E1C,E1H,E1T
R663	963 9004 423	Carbon chip 68 ohm 1/10W	for E3,EU,E1,E1C,E1H,E1T
R664	963 9004 070	Carbon chip 10 kohm 1/16W	for E3,EU,E1,E1C,E1H,E1T
R666	963 9004 423	Carbon chip 68 ohm 1/10W	for E3,EU,E1,E1C,E1H,E1T
R667	963 9004 070	Carbon chip 10 kohm 1/16W	for E3,EU,E1,E1C,E1H,E1T
R671,672	963 9004 465	Carbon chip 75 ohm 1/16W	for E3,EU,E1,E1C,E1H,E1T
R901,902	960 9009 270	Metal film 470 ohm 2W	
VR401	960 0096 606	Semi fixed resistor 20 kohm	
VR402	963 0056 205	Semi fixed resistor 50 kohm	for E3,EU,E1,E1C,E1H,E1T
VR402	960 0096 402	Semi fixed resistor 100 kohm	for E2
VR403	963 0052 005	Semi fixed resistor 200 kohm	
CAPACITORS GROUP			
C401,402	963 9004 685	Ceramic chip 1000pF/50V	
C403	963 9004 737	Ceramic chip 0.022uF/25V	
C404	963 9004 892	Ceramic 2pF/50V	
C405	963 9004 737	Ceramic chip 0.022uF/25V	
C406	963 9005 435	Ceramic chip 18pF/50V	
C408	960 9004 709	Ceramic 6pF/50V	
C409	963 9004 520	Ceramic 100pF/50V	
C410	963 9004 915	Ceramic 470pF/50V	
C411	963 9004 685	Ceramic chip 1000pF/50V	
C412	963 9004 737	Ceramic chip 0.022uF/25V	
C413	963 9004 575	Ceramic chip 100pF/50V	
C414		Electrolytic 2.2uF/50V	
C415		Electrolytic 47uF/10V	
C416		Electrolytic 10uF/35V	
C417		Electrolytic 100uF/16V	
C418	963 9004 698	Ceramic chip 0.01uF/50V	
C419		Electrolytic 10uF/35V	
C420,421	963 9004 591	Ceramic chip 22pF/50V	
C422	963 9004 656	Ceramic chip 470pF/50V	
C423,424	963 9004 737	Ceramic chip 0.022uF/25V	
C425		Electrolytic 4.7uF/50V	
C426		Electrolytic 3.3uF/50V	
C427		Electrolytic 4.7uF/50V	
C428	963 9004 737	Ceramic chip 0.022uF/25V	
C430	963 0021 900	Mylar film 0.047uF/200V	
C431	963 9004 627	Ceramic chip 33pF/50V	
C432		Electrolytic 47uF/10V	
C433	963 9004 737	Ceramic chip 0.022uF/25V	
C434		Electrolytic 1uF/50V	for E3,E

Ref. No.	Part No.	Part Name	Remarks
C434		Electrolytic 0.33uF/50V	for E2,E1,E1C,E1H,E1T
C435,436	963 9004 737	Ceramic chip 0.022uF/25V	
C437		Electrolytic 47uF/10V	
C438		Electrolytic 1uF/50V	
C439		Electrolytic 0.22uF/50V	
C440,441		Electrolytic 1uF/50V	
C442		Electrolytic 2.2uF/50V	
C443		Electrolytic 10uF/35V	
C444		Electrolytic 4.7uF/50V	
C445		Electrolytic 10uF/35V	
C446,447	963 9004 931	Ceramic 180pF/50V	for E1,E1C,E1H,E1T
C446,447	963 9005 448	Ceramic 330pF/50V	for E2
C446,447	963 9005 053	Ceramic 270pF/50V	for E3,EU
C448,449	963 9004 960	Ceramic 470pF/50V	for E3,EU
C448,449	963 9004 960	Ceramic 470pF/50V	for E1,E1C,E1H,E1T
C450,451		Electrolytic 10uF/35V	
C453	963 9004 614	Ceramic chip 27pF/50V	
C456	963 9004 672	Ceramic chip 680pF/50V	
C461	963 9004 591	Ceramic chip 22pF/50V	
C462	963 9004 656	Ceramic chip 470pF/50V	for E2
C463	963 9004 782	Mylar film 0.056uF/200V	
C464	963 9004 973	Ceramic 3pF/50V	
C471VT		Electrolytic 1uF/50V	
C472VT	963 9004 753	Ceramic chip 0.047uF/50V	
C481C	963 9004 575	Ceramic chip 100pF/50V	
C481FL,481FR	963 9004 575	Ceramic chip 100pF/50V	
C481SL,481SR	963 9004 575	Ceramic chip 100pF/50V	
C481SW	963 9004 575	Ceramic chip 100pF/50V	
C551		Electrolytic 2.2uF/50V	
C551M		Electrolytic 100uF/35V	
C551S	963 9004 562	Ceramic 0.047uF/50V	
C552-554		Electrolytic 0.1uF/50V	
C555,556	963 9004 546	Ceramic 0.01uF/16V	
C557		Electrolytic 10uF/35V	
C601	963 9004 575	Ceramic chip 100pF/50V	
C602-604		Electrolytic 47uF/10V	
C605,606		Electrolytic 470uF/6.3V	
C607		Electrolytic 100uF/16V	
C608	963 9004 575	Ceramic chip 100pF/50V	for E1,E1H,E1T
C611	963 9004 698	Ceramic chip 0.01uF/50V	
C612,613	963 9004 753	Ceramic chip 0.047uF/50V	
C651-653		Electrolytic 47uF/10V	for E3,EU,E1,E1C,E1H,E1T
C654,655		Electrolytic 470uF/10V	for E3,EU,E1,E1C,E1H,E1T
C656-658		Electrolytic 47uF/10V	for E3,EU,E1,E1C,E1H,E1T
C659,660		Electrolytic 470uF/10V	for E3,EU,E1,E1C,E1H,E1T
C661		Electrolytic 100uF/16V	for E3,EU,E1,E1C,E1H,E1T
C662,663	963 9004 753	Ceramic chip 0.047uF/50V	for E3,EU,E1,E1C,E1H,E1T
C664,665		Electrolytic 1uF/50V	for E3,EU,E1,E1C,E1H,E1T
C901,902	963 9004 533	Ceramic 0.001uF/50V	

Ref. No.	Part No.	Part Name	Remarks
C903		Electrolytic 1uF/50V	
C904	960 9003 108	Ceramic 0.022uF/25V	

OTHER PARTS GROUP				Q'ty
CF401	960 0187 104	FM ceramic filter SFE10.7MA8	for E3,EU,E1,E1C,E1H,E1T	1
CF401	960 0177 509	FM ceramic filter SFE10.7MS3	for E2	1
CF402	960 0187 104	FM ceramic filter SFE10.7MA8	for E3,EU	1
CF402	960 0177 509	FM ceramic filter SFE10.7MS3	for E2,E1,E1C,E1H,E1T	1
CF403	960 0187 609	Ceramic resonator BFU450C		1
CN392	963 0086 000	2P connector cord	for E3,EU	1
CN401	963 0046 503	10P connector base		1
CN402	963 0049 607	15P connector base		1
CN551	960 0124 604	14P connector base		1
CN552	963 0049 704	17P connector base		1
CN553	963 0049 801	20P connector base		1
CN554	963 0090 708	14P connector cord		1
CN601	963 0046 600	11P connector base		1
CN651	963 0090 805	4P connector cord	for E3,EU,E1,E1C,E1H,E1T	1
CN901	963 0090 902	3P connector cord		1
CN931	963 0089 502	2P connector cord	for E2,E1,E1C,E1H,E1T	1
CP302	963 0049 908	3P connector base		1
CP392	963 0048 909	3P connector base	for E3,EU	1
CP651	963 0050 104	4P connector base	for E3,EU,E1,E1C,E1H,E1T	1
FE401	960 0187 706	FM tuner FTE4-401TB		1
G401	—	1P lug wire L60 BK		1
G901	—	1P lug wire L80 BK		1
JK901	960 0187 502	Headphone jack	for E3,EU,E2	1
JK901	960 0176 306	Headphone jack	for E1,E1C,E1H,E1T	1
L401	963 0052 102	Inductor 1uH		1
L402	960 0010 307	Inductor 10uH		1
L403	963 0056 409	MW IF coil RBW07VB		1
SW391-397	963 0045 708	Tact switch		7
SW601	963 0056 700	Slide switch	for E1,E1H,E1T	1
SW901	960 0176 209	Push switch	for E3,EU	1
SW901	963 0056 603	Push switch	for E2,E1,E1C,E1H,E1T	1
T401	960 0007 323	MW IF coil PCFMAF-270		1
T402	960 0007 349	FM IF coil M292MEA-K5611FKG		1
T403	960 0007 352	FM IF coil 292MEA-K5612X		1
T404,405	960 0071 207	MPX filter 253AGG-K5001-KR	for E2	2
T406	960 0037 607	Antibirdie filter T126SE-K5256	for E2	1
X401	960 0187 405	Crystal 7.2MHz		1
X402	963 0043 302	Ceramic resonator CSB456F11		1

Ref. No.	Part No.	Part Name	Remarks	Q'ty
	960 0184 000	Bracket		2
	963 0054 003	Shield cover		1
	963 0088 406	Earth plate		1
	963 0052 403	3P Terminal		1
	960 0188 307	6P pin jack		1
	960 0194 508	1P pin jack		1
	960 0194 605	2P pin jack		1
	960 0188 404	3P pin jack		1
	960 0181 304	3P jack	for E3,EU,E1,E1C,E1H,E1T	1
	960 0181 401	DIN jack	for E3,EU,E1,E1C,E1H,E1T	1

PRE-AMP P.W.B. ASS'Y

Ref. No.	Part No.	Part Name	Remarks	
SEMICONDUCTORS GROUP				
Q501C	960 0196 603	Transistor KTC2874B		
Q501FL,501FR	960 0196 603	Transistor KTC2874B		
Q501SL,501SR	960 0196 603	Transistor KTC2874B		
Q502C	960 0196 205	Transistor KSA992F		
Q502FL,502FR	960 0196 205	Transistor KSA992F		
Q502SL,502SR	960 0196 205	Transistor KSA992F		
Q503C	960 0196 205	Transistor KSA992F		
Q503FL,503FR	960 0196 205	Transistor KSA992F		
Q503SL,503SR	960 0196 205	Transistor KSA992F		
Q504C	960 0196 506	Transistor KSC1845F		
Q504FL,504FR	960 0196 506	Transistor KSC1845F		
Q504SL,504SR	960 0196 506	Transistor KSC1845F		
RESISTORS GROUP				
R509C	960 9005 902	Metal film 1.2 kohm 1/4W		
R509FL,509FR	960 9005 902	Metal film 1.2 kohm 1/4W		
R509SL,509SR	960 9005 902	Metal film 1.2 kohm 1/4W		
R511C	960 9004 301	Metal film 47 ohm 1/4W		
R511FL,511FR	960 9004 301	Metal film 47 ohm 1/4W		
R511SL,511SR	960 9004 301	Metal film 47 ohm 1/4W		
CAPACITORS GROUP				
C501C		Electrolytic 22uF/16V		
C501FL,501FR		Electrolytic 22uF/16V		
C501M		Electrolytic 10uF/35V		
C501SL,501SR		Electrolytic 22uF/16V		
C502C		Electrolytic 10uF/35V		
C502FL,502FR		Electrolytic 10uF/35V		
C502SL,502SR		Electrolytic 10uF/35V		
C503C	960 9003 165	Ceramic 220pF/500V		
C503FL,503FR	960 9003 165	Ceramic 220pF/500V		
C503SL,503SR	960 9003 165	Ceramic 220pF/500V		
C504C	963 9003 178	Ceramic 220pF/50V		
C504FL,504FR	963 9003 178	Ceramic 220pF/50V		
C504SL,504SR	963 9003 178	Ceramic 220pF/50V		
C505C	963 9003 181	Ceramic 33pF/500V		
C505FL,505FR	963 9003 181	Ceramic 33pF/500V		
C505SL,505SR	963 9003 181	Ceramic 33pF/500V		
C506C		Electrolytic 100uF/10V		
C506FL,506FR		Electrolytic 100uF/10V		
C506SL,506SR		Electrolytic 100uF/10V		
C507C	963 9003 194	Mylar film 0.0022uF/100V		
C507FL,507FR	963 9003 194	Mylar film 0.0022uF/100V		
C507SL,507SR	963 9003 194	Mylar film 0.0022uF/100V		
OTHER PARTS GROUP				**Q'ty**
CN501	963 0046 406	9P connector base		1
CN502-504	963 0050 201	5P connector base		3
CN505	963 0050 308	6P connector base		1
CP554	963 0050 405	14P connector base		1
	960 0184 000	Bracket		2

DSP P.W.B. ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC802	269 0186 002	Optical connector GP1FA502RZ	
IC803	963 0073 903	IC 74VHCU04	
IC805,806	963 0043 807	IC BA4510F	
IC807	963 0073 709	IC M27W201	
IC807S	963 0025 508	IC IC socket	
IC808,809	963 0074 407	IC MM74LCX574WMX	
IC810	960 0195 507	IC LC89055W(ES4)	
IC811	963 0074 805	IC RC1117S33ST	
IC812	963 0079 208	IC CS49326-CL	
IC813	963 0074 601	IC AK4527B-VQ	
IC814-816	963 0024 004	IC NJM2068M	
IC817	269 0189 009	Optical connector GP1FA502TZ	
IC818,819	963 0074 203	IC MM74LCX244WMX	
IC820	963 0074 708	IC RC1117S25T	
IC822	960 0195 109	IC SN74LV00APW	
IC828	963 0074 300	IC MM74HCT244WMX	
IC829	960 0196 001	IC NJM7805FA	
IC830	963 0074 300	IC MM74HCT244WMX	
IC831	960 0195 303	IC SN74LV4040APWR	
IC832	963 0074 106	IC MM74HC151MX	
Q804C	960 0196 603	Transistor KTC2874B	
Q804FL,804FR	960 0196 603	Transistor KTC2874B	
Q804SL,804SR	960 0196 603	Transistor KTC2874B	
Q804SW	960 0196 603	Transistor KTC2874B	
Q805	963 0075 105	Transistor DTC114EK	
Q806	963 0058 203	Transistor DTA114EK	
Q807,808	963 0075 105	Transistor DTC114EK	
D801	960 0197 000	Diode KDS160	
D806,807	960 0197 000	Diode KDS160	
RESISTORS GROUP			
R801	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R803	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R804,805	963 9003 385	Carbon chip 100 ohm 1/16W	
R808	963 9004 274	Carbon chip 33 kohm 1/16W	
R817-825	963 9004 070	Carbon chip 10 kohm 1/16W	
R830	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R831	963 9004 070	Carbon chip 10 kohm 1/16W	
R834,835	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R836	963 9004 070	Carbon chip 10 kohm 1/16W	
R838	963 9004 070	Carbon chip 10 kohm 1/16W	
R839	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R841	963 9004 339	Carbon chip 470 ohm 1/16W	
R842	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R845R	963 9004 355	Carbon chip 47 kohm 1/16W	
R848	963 9003 385	Carbon chip 100 ohm 1/16W	
R850	963 9004 465	Carbon chip 75 ohm 1/16W	
R854	963 9004 216	Carbon chip 2.2 kohm 1/16W	
R854L	963 9004 355	Carbon chip 47 kohm 1/16W	

Ref. No.	Part No.	Part Name	Remarks
R855	963 9004 083	Carbon chip 100 kohm 1/16W	
R856	963 9004 070	Carbon chip 10 kohm 1/16W	
R859L,859R	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R860L,860R	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R861	963 9004 326	Carbon chip 47 ohm 1/16W	
R861L,861R	963 9004 339	Carbon chip 470 ohm 1/16W	
R862L,862R	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R863L,863R	963 9004 339	Carbon chip 470 ohm 1/16W	
R864C	963 9004 083	Carbon chip 100 kohm 1/16W	
R864FL,864FR	963 9004 083	Carbon chip 100 kohm 1/16W	
R864SL,864SR	963 9004 083	Carbon chip 100 kohm 1/16W	
R864SW	963 9004 083	Carbon chip 100 kohm 1/16W	
R866C	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R866FL,866FR	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R866SL,866SR	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R866SW	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R867C	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R867FL,867FR	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R867SL,867SR	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R867SW	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R868C	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R868FL,868FR	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R868SL,868SR	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R868SW	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R869C	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R869FL,869FR	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R869SL,869SR	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R869SW	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R870C	963 9003 398	Carbon chip 1 kohm 1/16W	
R870FL,870FR	963 9003 398	Carbon chip 1 kohm 1/16W	
R870SL,870SR	963 9003 398	Carbon chip 1 kohm 1/16W	
R870SW	963 9003 398	Carbon chip 1 kohm 1/16W	
R871C	963 9004 083	Carbon chip 100 kohm 1/16W	
R871FL,871FR	963 9004 083	Carbon chip 100 kohm 1/16W	
R871SL,871SR	963 9004 083	Carbon chip 100 kohm 1/16W	
R871SW	963 9004 083	Carbon chip 100 kohm 1/16W	
R872C	963 9004 216	Carbon chip 2.2 kohm 1/16W	
R872FL,872FR	963 9004 216	Carbon chip 2.2 kohm 1/16W	
R872SL,872SR	963 9004 216	Carbon chip 2.2 kohm 1/16W	
R872SW	963 9004 216	Carbon chip 2.2 kohm 1/16W	
R880,881	963 9004 326	Carbon chip 47 ohm 1/16W	
R911	963 9004 070	Carbon chip 10 kohm 1/16W	
R913	963 9004 096	Carbon chip 1 Mohm 1/16W	
R922	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R923	963 9004 410	Carbon chip 6.2 kohm 1/16W	
R927	963 9004 465	Carbon chip 75 ohm 1/16W	
R928	963 9004 371	Carbon chip 5.1 kohm 1/16W	
R929	963 9004 481	Carbon chip 8.2 kohm 1/16W	
R930	963 9004 261	Carbon chip 3 kohm 1/16W	
R931	963 9004 410	Carbon chip 6.2 kohm 1/16W	
R931L,931R	963 9004 177	Carbon chip 18 kohm 1/16W	

Ref. No.	Part No.	Part Name	Remarks
R932	963 9004 342	Carbon chip 4.7 kohm 1/16W	
R938	963 9004 368	Carbon chip 470 kohm 1/16W	
R940	963 9004 070	Carbon chip 10 kohm 1/16W	
R949	963 9004 326	Carbon chip 47 ohm 1/16W	
R952,953	963 9003 385	Carbon chip 100 ohm 1/16W	
CAPACITORS GROUP			
C801	963 9004 711	Ceramic chip 0.1uF/50V	
C802,803	963 9004 591	Ceramic chip 22pF/50V	
C805	963 9004 591	Ceramic chip 22pF/50V	
C808	963 9004 711	Ceramic chip 0.1uF/50V	
C809		Electrolytic 47uF/10V	
C810	963 9004 711	Ceramic chip 0.1uF/50V	
C811		Electrolytic 47uF/10V	
C812	963 9004 711	Ceramic chip 0.1uF/50V	
C813		Electrolytic 47uF/10V	
C814	963 9004 591	Ceramic chip 22pF/50V	
C815	963 9004 711	Ceramic chip 0.1uF/50V	
C816	963 9004 591	Ceramic chip 22pF/50V	
C817	963 9004 711	Electrolytic 0.1uF/50V	
C818	963 9004 711	Ceramic chip 0.1uF/50V	
C819,820		Electrolytic 47uF/10V	
C821		Electrolytic 100uF/10V	
C822,823	963 9004 711	Ceramic chip 0.1uF/50V	
C824		Electrolytic 47uF/10V	
C825		Electrolytic 1uF/50V	
C826		Electrolytic 10uF/35V	
C827	963 9004 711	Ceramic chip 0.1uF/50V	
C828	963 9004 698	Ceramic chip 0.01uF/50V	
C829		Electrolytic 10uF/35V	
C830-832	963 9004 711	Ceramic chip 0.1uF/50V	
C833	963 9004 656	Ceramic chip 470pF/50V	
C834		Electrolytic 10uF/35V	
C835		Electrolytic 1uF/50V	
C836		Electrolytic 220uF/6.3V	
C837,838	963 9004 711	Ceramic chip 0.1uF/50V	
C839	963 9004 698	Ceramic chip 0.01uF/50V	
C840		Electrolytic 2.2uF/50V	
C841		Electrolytic 47uF/10V	
C842	963 9004 711	Ceramic chip 0.1uF/50V	
C844	963 9004 711	Ceramic chip 0.1uF/50V	
C845	963 9004 698	Ceramic chip 0.01uF/50V	
C849	963 9004 698	Ceramic chip 0.01uF/50V	
C851	963 9004 698	Ceramic chip 0.01uF/50V	
C854,855		Electrolytic 100uF/25V	
C856-863	963 9004 711	Ceramic chip 0.1uF/50V	
C864L,864R		Electrolytic 10uF/35V	
C865L,865R	963 9004 575	Ceramic chip 100pF/50V	
C866	963 9004 698	Ceramic chip 0.01uF/50V	
C869L,869R	963 9004 575	Ceramic chip 100pF/50V	
C871L,871R	963 9004 685	Ceramic chip 1000pF/50V	
C873C	963 9004 672	Ceramic chip 680pF/50V	
C873FL,873FR	963 9004 672	Ceramic chip 680pF/50V	
C873SL,873SR	963 9004 672	Ceramic chip 680pF/50V	
C873SW	963 9004 672	Ceramic chip 680pF/50V	
C874C	963 9004 672	Ceramic chip 680pF/50V	
C874FL,874FR	963 9004 672	Ceramic chip 680pF/50V	
C874SL,874SR	963 9004 672	Ceramic chip 680pF/50V	
C874SW	963 9004 672	Ceramic chip 680pF/50V	
C875C		Electrolytic 10uF/35V	
C875FL,875FR		Electrolytic 10uF/35V	
C875SL,875SR		Electrolytic 10uF/35V	
C875SW		Electrolytic 10uF/35V	
C876C	963 9004 740	Ceramic chip 3300pF/50V	
C876FL,876FR	963 9004 740	Ceramic chip 3300pF/50V	
C876SL,876SR	963 9004 740	Ceramic chip 3300pF/50V	
C876SW	963 9004 740	Ceramic chip 3300pF/50V	
C880C		Electrolytic 10uF/35V	
C880FL,880FR		Electrolytic 10uF/35V	
C880SL,880SR		Electrolytic 10uF/35V	
C880SW		Electrolytic 10uF/35V	
C908,909	963 9004 614	Ceramic chip 27pF/50V	
C916	963 9004 711	Ceramic chip 0.1uF/50V	
C917		Electrolytic 10uF/35V	
C918	963 9004 711	Ceramic chip 0.1uF/50V	
C919	963 9004 698	Ceramic chip 0.01uF/50V	
C920	963 9004 711	Ceramic chip 0.1uF/50V	
C921	963 9004 698	Ceramic chip 0.01uF/50V	
C923	963 9004 711	Ceramic chip 0.1uF/50V	
C925	963 9004 711	Ceramic chip 0.1uF/50V	
C926		Electrolytic 10uF/35V	
C931	963 9004 698	Ceramic chip 0.01uF/50V	
C936	963 9004 711	Ceramic chip 0.1uF/50V	
C937		Electrolytic 10uF/35V	
C938		Electrolytic 1uF/50V	
C939,940	963 9004 698	Ceramic chip 0.01uF/50V	
C943	963 9004 711	Electrolytic 0.1uF/50V	
C944	963 9004 698	Ceramic chip 0.01uF/50V	
C946,947	963 9004 711	Ceramic chip 0.1uF/50V	
C948		Electrolytic 10uF/35V	
C949		Electrolytic 2.2uF/50V	
C950	963 9004 711	Ceramic chip 0.1uF/50V	
C951		Electrolytic 100uF/10V	
C952,953	963 9004 711	Ceramic chip 0.1uF/50V	
C954	963 9004 698	Ceramic chip 0.01uF/50V	
C956	963 9004 685	Ceramic chip 1000pF/50V	
C957	963 9004 711	Ceramic chip 0.1uF/50V	
C958		Electrolytic 100uF/10V	

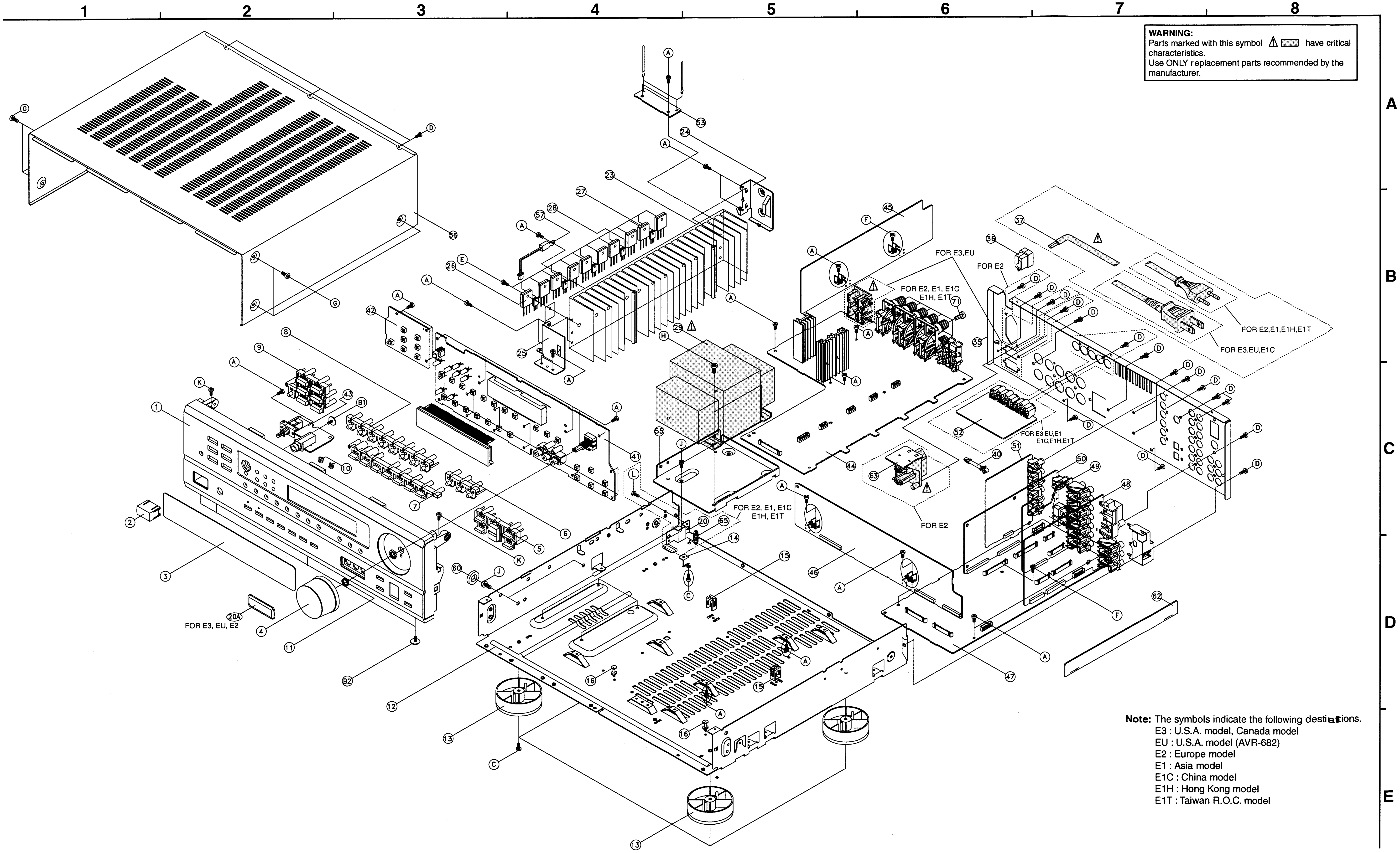
Ref. No.	Part No.	Part Name	Remarks	Q'ty
OTHER PARTS GROUP				
CB801	963 0050 502	Chip beads HB-IT2012		1
CB803-808	963 0050 502	Chip beads HB-IT2012		6
CB828	963 0050 502	Chip beads HB-IT2012		1
CN801,802	963 0049 704	17P connector base		2
CN803	963 0046 309	8P connector base		1
JACK801	963 0052 500	1P pin jack		1
L801,802	963 0050 803	Inductor 4.7uH		2
L803	963 0050 900	Inductor 2.2uH		1
L805,806	963 0050 803	Inductor 4.7uH		2
L807	963 0050 900	Inductor 2.2uH		1
XTAL801	960 0180 907	Crystal 12.288MHz		1

Note : The symbols in the column "Remarks" indicate the following destinations.
E1 : Asia model
E1H : Hong Kong model
E1T : Taiwan R.O.C. model

VOLTAGE SEL. P.W.B. ASS'Y
(for Asia, Hong Kong & Taiwan R.O.C. model)

Ref. No.	Part No.	Part Name	Remarks	Q'ty
OTHER PARTS GROUP				
CN105	963 0059 105	2P connector cord	for E1,E1H,E1T	1
CN903	963 0058 805	2P connector cord	for E1,E1H,E1T	1
CP901	963 0061 203	5P connector base	for E1,E1H,E1T	1
CP902	963 0059 309	3P connector cord	for E1,E1H,E1T	1
⚠ F101	960 0142 602	Fuse 250V-T2.5A	for E1,E1H,E1T	1
F101A,101B	960 0005 804	Fuse clip	for E1,E1H,E1T	2
⚠ F102	963 0044 709	Fuse 250V-T3.15A	for E1,E1H,E1T	1
F102A,102B	960 0005 804	Fuse clip	for E1,E1H,E1T	2
⚠ F901	963 0057 107	Fuse 250V-T6.3A	for E1,E1H,E1T	1
F901A,901B	960 0005 804	Fuse clip	for E1,E1H,E1T	2
JK911	960 0143 203	AC outlet	for E1,E1H,E1T	1
JK912	963 0056 904	Slide switch	for E1,E1H,E1T	1
		P.C. supporter	for E1,E1H,E1T	2
		Card spacer	for E1,E1H,E1T	1

EXPLODED VIEW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E1C,E1H,E1T
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FOR E2
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WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

Note: The symbols indicate the following destinations.
E3 : U.S.A. model, Canada model
EU : U.S.A. model (AVR-682)
E2 : Europe model
E1 : Asia model
E1C : China model
E1H : Hong Kong model
E1T : Taiwan R.O.C. model

PARTS LIST OF EXPLODED VIEW

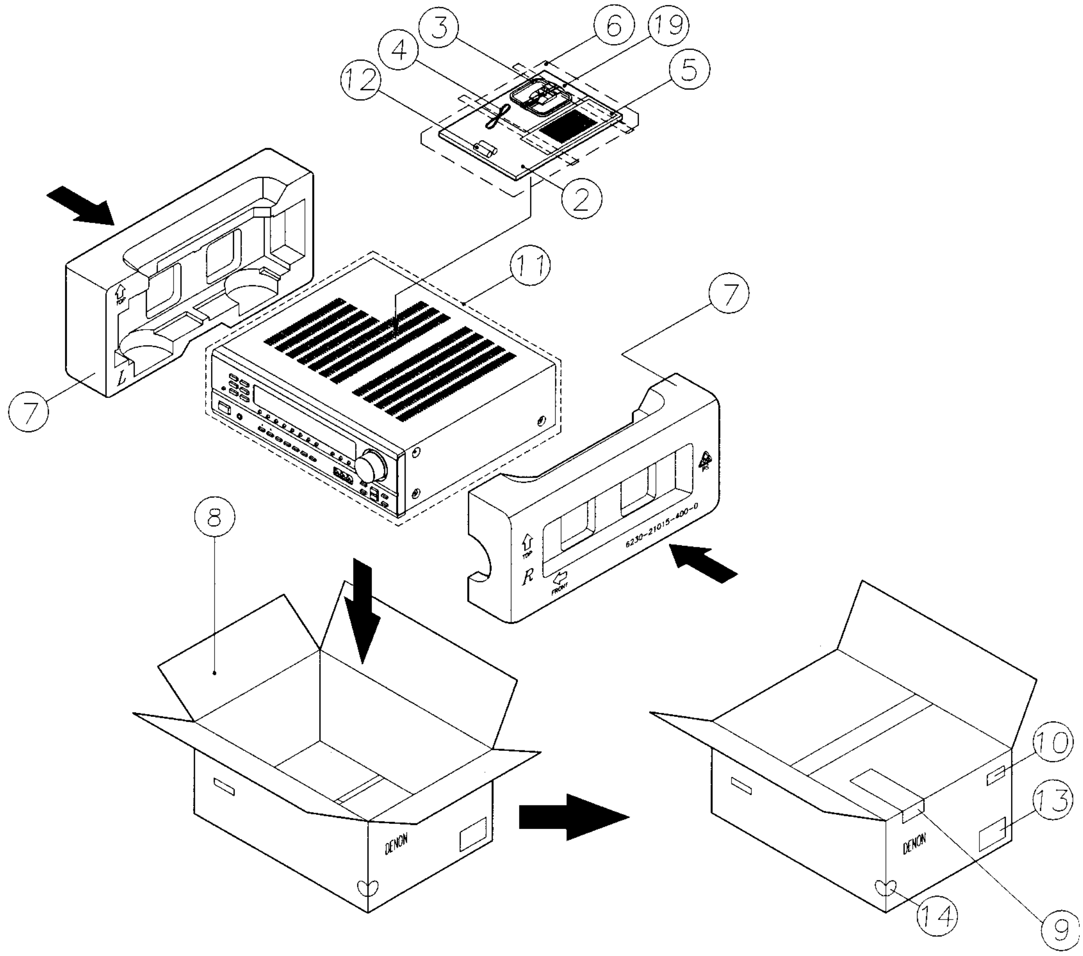
Note : The symbols in the column "Remarks" indicate the following destinations.
E3: U.S.A. & Canada model
EU: U.S.A. model (AVR-682)
E2: Europe model
E1: Asia model
E1C: China model
E1H: Hong Kong model
E1T: Taiwan R.O.C. model

Ref. No.	Part No.	Part Name	Remarks	Q'ty
41F	963 0073 149	CPU P.W.B. Ass'y	for E3,EU	1
41F	963 0073 136	CPU P.W.B. Ass'y	for E2	1
41F	963 0073 110	CPU P.W.B. Ass'y	for E1,E1H,E1T	1
41F	963 0073 123	CPU P.W.B. Ass'y	for E1C	1
41		Front P.W.B.		
47		CPU P.W.B.		
53		Video CNT P.W.B.	for E3,EU,E1,E1C,E1H,E1T	
63		Outlet P.W.B.	for E2	
42F	963 0073 246	CNT P.W.B. Ass'y	for E3,EU	1
42F	963 0073 233	CNT P.W.B. Ass'y	for E2	1
42F	963 0073 217	CNT P.W.B. Ass'y	for E1,E1H,E1T	1
42F	963 0073 220	CNT P.W.B. Ass'y	for E1C	1
42		Switch P.W.B.		
43		Headphone P.W.B.		
46		CNT P.W.B.		
48		Tuner P.W.B.		
51		Video P.W.B.		
52		S-Video P.W.B.	for E3,EU,E1,E1C,E1H,E1T	
44F	963 0073 042	Main P.W.B. Ass'y	for E3,EU	1
44F	963 0073 039	Main P.W.B. Ass'y	for E2	1
44F	963 0073 013	Main P.W.B. Ass'y	for E1,E1H,E1T	1
44F	963 0073 026	Main P.W.B. Ass'y	for E1C	1
44		Main P.W.B.		
49		Input P.W.B.		
62		Front CNT P.W.B.		
45F	963 0073 343	Pre-amp P.W.B. Ass'y	for E3,EU	1
45F	963 0073 330	Pre-amp P.W.B. Ass'y	for E2	1
45F	963 0073 314	Pre-amp P.W.B. Ass'y	for E1,E1H,E1T	1
45F	963 0073 327	Pre-amp P.W.B. Ass'y	for E1C	1
45		Pre-amp P.W.B.		
50F	963 0073 440	DSP P.W.B. Ass'y	for E3,EU	1
50F	963 0073 437	DSP P.W.B. Ass'y	for E2	1
50F	963 0073 411	DSP P.W.B. Ass'y	for E1,E1H,E1T	1
50F	963 0073 424	DSP P.W.B. Ass'y	for E1C	1
50		DSP P.W.B.		
64F	963 0079 004	Voltage sel. P.W.B. Ass'y	for E1,E1H,E1T	1
64		Voltage sel. P.W.B.	for E1,E1H,E1T	
1	963 0072 056	Front panel	for E3	1
1	963 0072 027	Front panel	for EU	1
1	963 0072 030	Front panel	for E2	1
1	963 0072 014	Front panel	for E1,E1C,E1H,E1T	1
2	960 0185 009	Power button	for black model	1
2	960 0191 705	Power button	for gold model	1
3	963 0072 412	Display window		1
4	963 0054 906	Volume knob	for black model	1
4	960 0191 608	Volume knob	for gold model	1
5	963 0053 703	5 key button	for black model	1
5	960 0191 802	5 key button	for gold model	1
6	963 0053 606	3 key button	for black model	1
6	960 0192 209	3 key button	for gold model	1
7	963 0076 706	7 key button (A)	for black model	1
7	963 0072 506	7 key button (A)	for gold model	1
8	963 0053 509	8 key button	for black model	1

Ref. No.	Part No.	Part Name	Remarks	Q'ty
8	960 0192 102	8 key button	for gold model	1
9	963 0076 803	7 key button (B)	for black model	1
9	963 0072 603	7 key button (B)	for gold model	1
10	960 0191 417	LED lens		2
11	963 0051 006	Knob spring		1
12	960 0198 229	Main chassis		1
13	960 0183 904	Foot		4
14	960 0184 107	Supporter bracket		1
15	960 0003 301	PWB supporter		2
16	963 0051 103	Card spacer		2
20	963 0081 607	Side bracket	for E2,E1,E1C,E1H,E1T	1
20A	963 0090 300	Pin jack cover	for E3,EU,E2	1
23	—	Heat sink		1
24	960 0184 204	Heat sink bracket B		1
25	960 0184 301	Heat sink bracket F		1
26	960 0090 107	Transistor 2SB1599Y	Q102C,102FL,102FR, 102SL,102SR	5
27	960 0090 000	Transistor 2SD2389Y	Q101C,101FL,101FR, 101SL,101SR	5
28	963 0058 106	Transistor 2SD947F	Q103C,103FL,103FR, 103SL,103SR	5
⚠ 29	963 0090 245	Power trans	for E3,EU	1
⚠ 29	963 0090 232	Power trans	for E2	1
⚠ 29	963 0090 216	Power trans	for E1,E1H,E1T	1
⚠ 29	963 0090 229	Power trans	for E1C	1
35	963 0072 137	Back chassis	for E3	1
35	963 0072 140	Back chassis	for EU	1
35	963 0072 124	Back chassis	for E2	1
35	963 0072 111	Back chassis	for E1,E1H,E1T	1
35	963 0072 153	Back chassis	for E1C	1
36	960 0192 403	AC cord stopper		1
⚠ 37	960 0166 400	AC cord	for E3,EU	1
⚠ 37	960 0202 500	AC cord	for E2	1
⚠ 37	963 0060 408	AC cord	for E1,E1T	1
⚠ 37	963 0063 301	AC cord	for E1C	1
⚠ 37	960 0143 009	AC cord	for E1H	1
40	963 0061 902	Fastener		1
55	963 0072 205	Trans bracket		1
56	963 0053 017	Top cover	for black model	1
56	960 0191 019	Top cover	for gold model	1
57	960 0187 900	Posistor		1
60	963 0072 302	Rubber cushion		2
65	963 0044 602	P.C. supporter	for E2,E1,E1C,E1H,E1T	1
71	960 0093 104	Terminal bushing	for E2,E1,E1C,E1H,E1T	10
★ 72	960 0155 301	Wire clamp band		3
★ 73	963 0054 207	Fuse caution label	for E3,EU	1
★ 74	963 0076 007	15P FCC		1

Ref. No.	Part No.	Part Name	Remarks	Q'ty
SCREWS				
A	963 0018 007	Screw 3x8 CBTS(B)-Z	for E3,EU,E1,E1C,E1H,E1T	46
A	963 0018 007	Screw 3x8 CBTS(B)-Z	for E2	44
B1	960 9008 420	Screw 3x8 CBTS(B) W-Z	for black model	1
B1	960 9008 420	Screw 3x8 CBTS(B) W-Z	for gold model	5
B2	960 9008 527	Screw 3x8 CBTS(B) W-B	for black model	4
C	963 0048 200	Screw 3x10 CBTS(B)-Z		5
D	960 0108 714	Screw 3x10 CBTS(B) DOT-B	for E3,EU	32
D	960 0108 714	Screw 3x10 CBTS(B) DOT-B	for E2	29
D	960 0108 714	Screw 3x10 CBTS(B) DOT-B	for E1,E1T	34
D	960 0108 714	Screw 3x10 CBTS(B) DOT-B	for E1C,E1H	30
E	963 9004 009	Screw 3x14 CHTS(B) SW W-Z		15
F	963 0018 104	Screw 3x17 CBTS(B)-Z	for E3,EU,E2,E1,E1H,E1T	4
F	963 0018 104	Screw 3x17 CBTS(B)-Z	for E1C	2
G	963 0048 307	Screw 4x8 CBTS(B) DOT-B	for black model	6
G	963 9004 012	Screw 4x8 CBTS(B) DOT-Ni	for gold model	6
H	960 9008 417	Screw 4x8 CBTS SW W-Z		4
J	963 9004 025	Screw 4x6 CBTS(S)-Z		6
K	963 9004 038	Screw 3x8 CBTS(B) W-Z		2
L	963 9004 041	Screw 3x5 CBTS(B)-Z	for E2,E1,E1C,E1H,E1T	2

PACKING VIEW



PARTS LIST OF PACKING & ACCESSORIES

Note : The symbols in the column "Remarks" indicate the following destinations.
E3: U.S.A. & Canada model
EU: U.S.A. model (AVR-682)
E2: Europe model
E1: Asia model
E1C: China model
E1H: Hong Kong model
E1T: Taiwan R.O.C. model

Ref. No.	Part No.	Part Name	Remarks	Q'ty
2	963 0072 836	Instruction manual	for E3,EU	1
2	963 0072 823	Instruction manual	for E2	1
2	963 0072 810	Instruction manual	for E1,E1C,E1H,E1T	1
3	963 0052 306	Loop antenna		1
4	963 0052 209	FM antenna		1
5	963 0076 900	Remote controller RC-896		1
6	963 0045 106	Poly. bag		1
7	960 0193 101	Cushion		1
★ 7A	963 0055 918	Pad	for E1H	2
8	963 0072 933	Carton case	for E3,E2	1
8	963 0072 959	Carton case	for EU	1
8	963 0072 917	Carton case	for E1,E1C,E1T	1
8	963 0072 920	Carton case	for E1H	1
9	515 0866 005	Warranty card	for E3,EU	1
9A	—	Envelope (warranty)	for E3,EU	1
10	—	UPC label	for E3	1
10	—	UPC label	for EU	1
10	—	POS label	for E2	1
11	960 0185 601	Poly. bag	for set	1
12	—	Battery (R6P/AA)		2
13	960 0092 901	Control card		2
14	—	Color label (gold)	for gold model	2
★ 16	515 0867 101	Service station list (EX)		1
★ 21	—	RDS label	for E2	2
★ 22	513 3342 009	Carton label (B)	for E1,E1C,E1H,E1T	1
★ 23	513 3341 000	Carton label (A)	for E1,E1C,E1H,E1T	1
★ 24	513 3340 001	Label (A)	for E1,E1H	1
★ 25	963 0025 809	Preset label	for E1,E1H,E1T	1
★ 26	513 3331 007	DTS label	for E1,E1H,E1T	1
★ 27	—	CCIB label	for E1C	1
★ 28	—	Box label (gold)	for E1C	1
★ 29	513 2481 000	Serial no. label (T)	for E1T	1
★ 30	—	Caution label	for E1T	1
★ 31	—	Kolin label (rating)	for E1T	1
★ 32	—	Kolin label (box)	for E1T	1
★ 33	960 0185 300	Registration card	for E3,EU	1
⚠ ★ 35	963 0061 300	AC adapter	for E1,E1C,E1T	1

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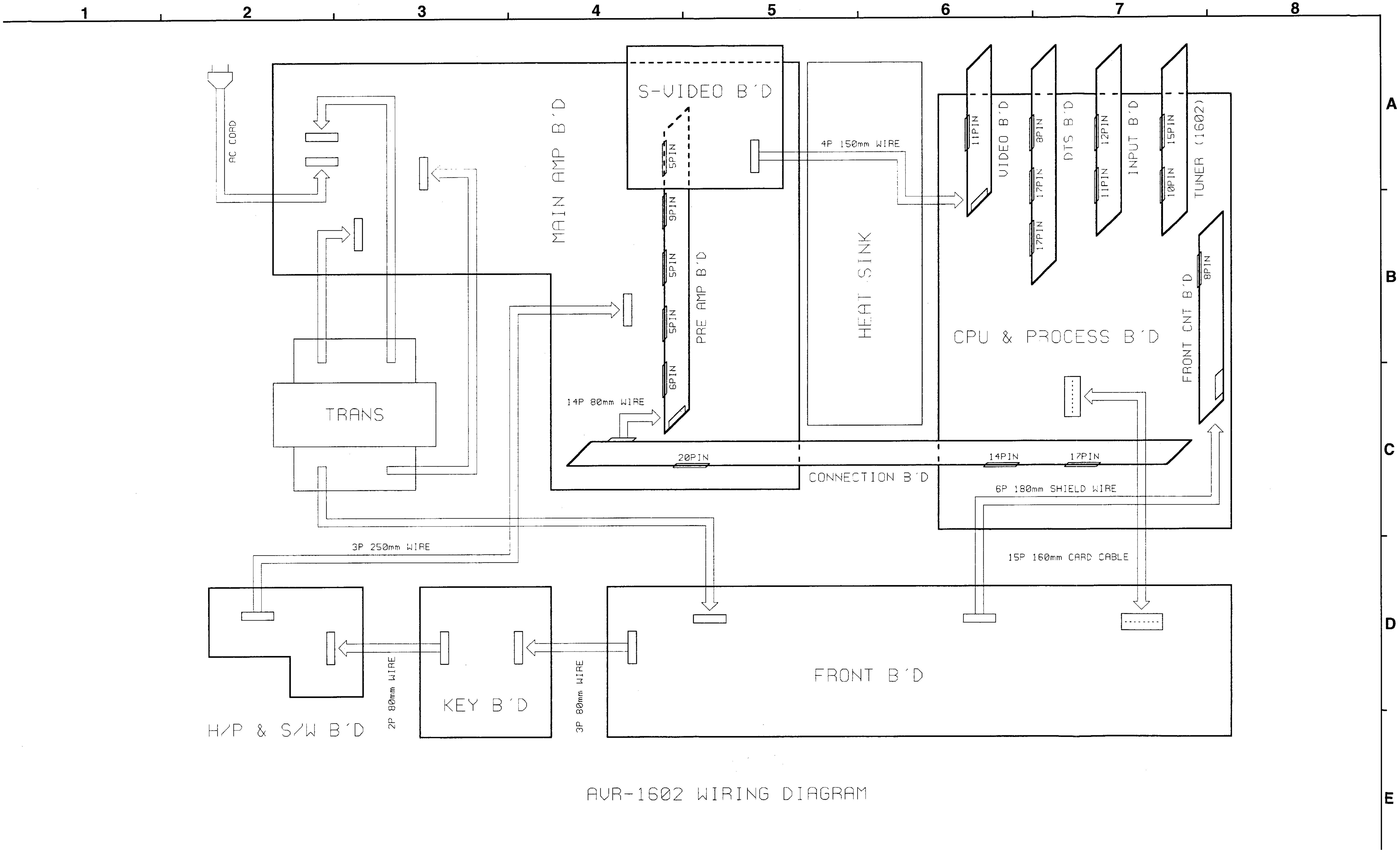
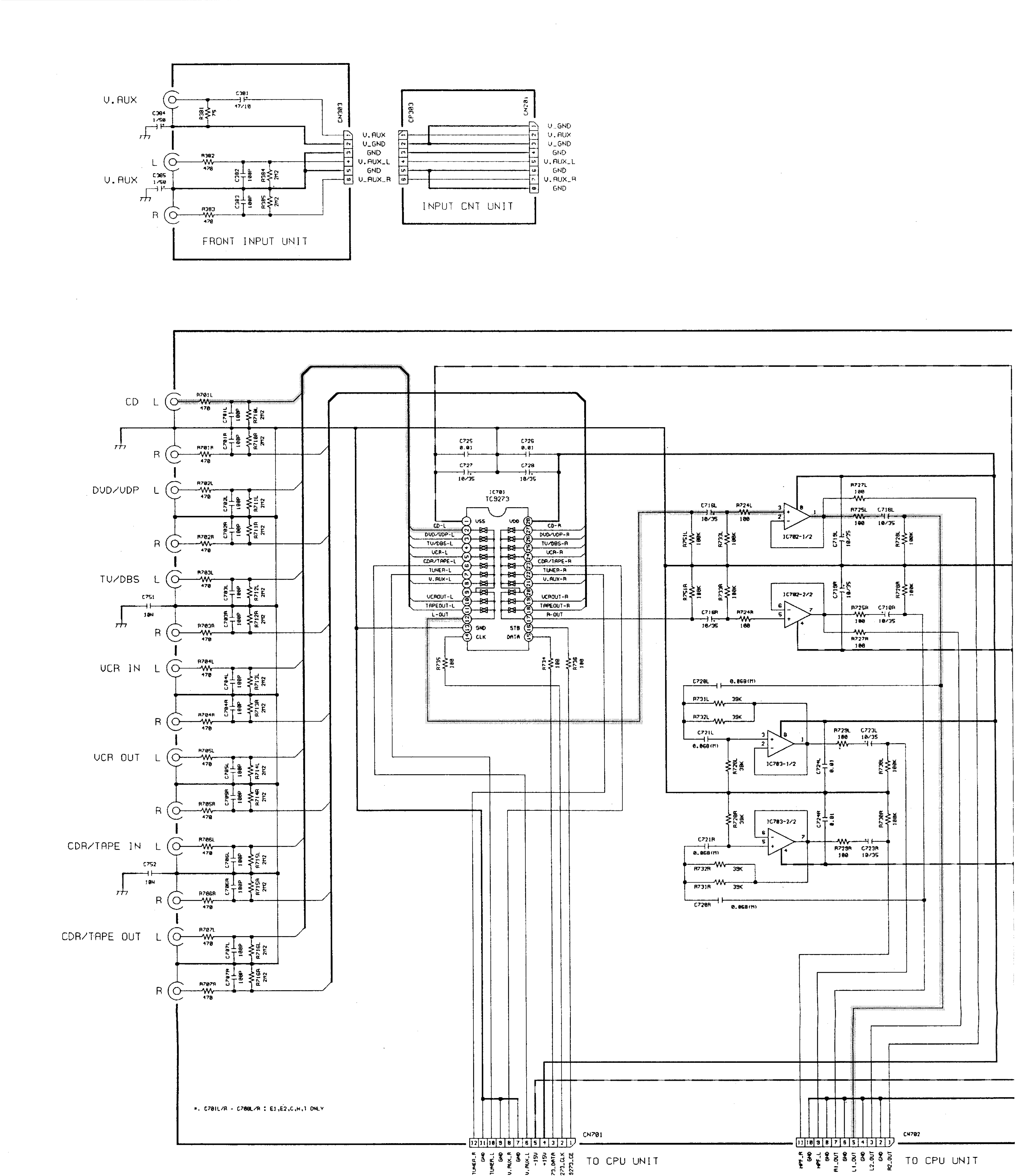
WIRING DIAGRAM


1
2
3
4
5
6
7
8
A
B
C
D
E
AC CORD
MAIN AMP B'D
S-VIDEO B'D
5PIN
9PIN
5PIN
5PIN
6PIN
PRE AMP B'D
4P 150mm WIRE
HEAT SINK
11PIN
VIDEO B'D
8PIN
17PIN
17PIN
DTS B'D
12PIN
11PIN
INPUT B'D
15PIN
10PIN
TUNER (1602)
8PIN
FRONT CNT B'D
CPU & PROCESS B'D
TRANS
14P 80mm WIRE
20PIN
14PIN
17PIN
CONNECTION B'D
6P 180mm SHIELD WIRE
3P 250mm WIRE
15P 160mm CARD CABLE
H/P & S/W B'D
2P 80mm WIRE
KEY B'D
3P 80mm WIRE
FRONT B'D

AVR-1602 WIRING DIAGRAM

SCHEMATIC DIAGRAMS(1/7)


1
2
3
4
5
6
V.AUX
V.AUX
L
R
C301 47/10
C304 1/50
C305 1/50
R381
R382 470
R383 470
C382 100P
C383 100P
R384 2M2
R385 2M2
CN303
V.AUX
V_GND
GND
V.AUX_L
GND
V.AUX_R
FRONT INPUT UNIT
CP303
CN201
V_GND
V.AUX
V_GND
GND
V.AUX_L
GND
V.AUX_R
GND
INPUT CNT UNIT
CD
DVD/VDP
TV/DBS
VCR IN
VCR OUT
CDR/TAPE IN
CDR/TAPE OUT
C751 10N
C752 10N
C725 0.01
C726 0.01
C727 10/35
C728 10/35
IC701 TC9273
VSS
VDD
CD-L
CD-R
DVD/VDP-L
DVD/VDP-R
TV/DBS-L
TV/DBS-R
VCR-L
VCR-R
CDR/TAPE-L
CDR/TAPE-R
TUNER-L
TUNER-R
V.AUX-L
V.AUX-R
VCROUT-L
VCROUT-R
TAPEOUT-L
TAPEOUT-R
L-OUT
R-OUT
GND
STB
CLK
DATA
R735 100
R734 100
R736 100
IC702-1/2
IC702-2/2
IC703-1/2
IC703-2/2
R727L 100
R725L 100
C718L 10/35
C716L 10/35
R724L 100
R751L 100K
R733L 100K
C719L 10/35
R728L 100K
R751R 100K
R733R 100K
C719R 10/35
R728R 100K
C716R 10/35
R724R 100
R725R 100
C710R 10/35
R727R 100
C720L 0.068(M)
R731L 39K
R732L 39K
C721L 0.068(M)
R729L 100
C723L 10/35
R726L 39K
C724L 0.01
R730L 100K
R726R 39K
C724R 0.01
R730R 100K
C721R 0.068(M)
R732R 39K
R731R 39K
C720R 0.068(M)
R729R 100
C723R 10/35
*. C701L/R - C708L/R : E1,E2,C,H,1 ONLY
CN701
TUNER_R
GND
TUNER_L
GND
V.AUX_R
GND
V.AUX_L
-15V
+15V
9273_DATA
9273_CLK
9273_CE
TO CPU UNIT
CN702
HPF_R
GND
HPF_L
GND
R1_OUT
GND
L1_OUT
GND
L2_OUT
GND
R2_OUT
TO CPU UNIT

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

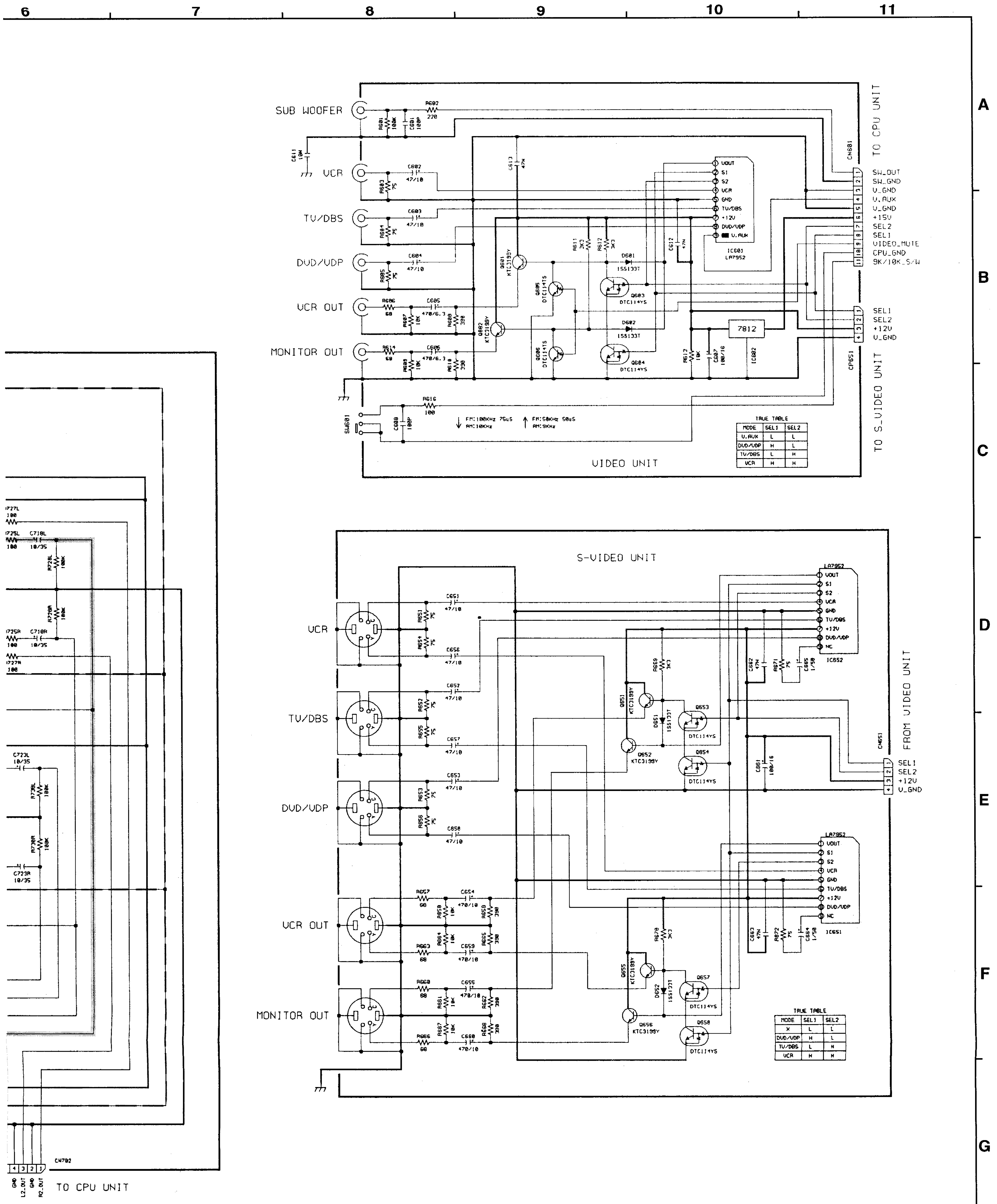
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

CAUTION:

Before returning the unit to the customer, make sure you make either (1 leakage current check or (2) a line to chassis resistance check. If the le current exceeds 0.5 milliamps, or if the resistance from chassis to eithe of the power card is less than 460kohms, the unit is defective.

WARNING:

DO NOT return the unit to the customer until the problem is located an corrected.


6
7
8
9
10
11
A
B
C
D
E
F
G
SUB WOOFER
VCR
TV/DBS
DVD/VDP
VCR OUT
MONITOR OUT
R602 220
R601 100K
C601 100P
C611 10M
R603 75
C602 47/10
C603 47/10
R604 75
C604 47/10
R605 75
R606 68
C605 470/6.3
R607 10K
R608 390
R614 68
C606 470/6.3
R609 10K
R610 390
R616 100
C608 100P
SW601
FM:100KHz 75uS AM:10KHz
FM:50KHz 50uS AM:9KHz
C613 47M
Q601 KTC3199Y
Q602 KTC3199Y
Q605 DTC114TS
Q606 DTC114TS
R611 3K3
R612 3K3
D601 1SS133T
D602 1SS133T
Q603 DTC114YS
Q604 DTC114YS
C612 47M
R617 10K
C607 100/16
IC602
7812
IC601 LA7952
VOUT
S1
S2
VCR
GND
TV/DBS
+12V
DVD/VDP
V.AUX
CN601
SW_OUT
SW_GND
V_GND
V_AUX
V_GND
+15V
SEL2
SEL1
VIDEO_MUTE
CPU_GND
9K/10K_S/W
TO CPU UNIT
CP651
SEL1
SEL2
+12V
V_GND
TO S_VIDEO UNIT
VIDEO UNIT
S-VIDEO UNIT
C651 47/10
R651 75
R654 75
C656 47/10
C652 47/10
R652 75
R655 75
C657 47/10
C653 47/10
R653 75
R656 75
C658 47/10
R657 68
C654 470/10
R658 10K
R659 390
R663 68
R664 10K
R665 390
C659 470/10
R660 68
C655 470/10
R661 10K
R662 390
R666 68
R667 10K
R668 390
C660 470/10
LA7952
IC652
NC
C682 47M
R671 75
C685 1/50
R669 3K3
Q651 KTC3199Y
D651 1SS133T
Q653
Q652 KTC3199Y
DTC114YS
Q654
C681 100/16
CN651
FROM VIDEO UNIT
IC651
C683 47M
R672 75
C684 1/50
R670 3K3
Q655 KTC3199Y
D652 1SS133T
Q657 DTC114YS
Q656 KTC3199Y
Q658 DTC114YS
R727L 100
R725L 100
C718L 10/35
R728L 100K
R728R 100K
R725R 100
C718R 10/35
R727R 100
C723L 10/35
R730L 100K
R730R 100K
C723R 10/35
CN702
GND
L2_OUT
GND
R2_OUT
TO CPU UNIT

TRUE TABLE

MODE	SEL1	SEL2
V.AUX	L	L
DVD/VDP	H	L
TV/DBS	L	H
VCR	H	H

TRUE TABLE

MODE	SEL1	SEL2
X	L	L
DVD/VDP	H	L
TV/DBS	L	H
VCR	H	H

▨ have critical characteristics.
mmended by the manufacture.

tomer, make sure you make either (1) a
to chassis resistance check. If the leakage
f the resistance from chassis to either side
ohms, the unit is defective.

omer until the problem is located and

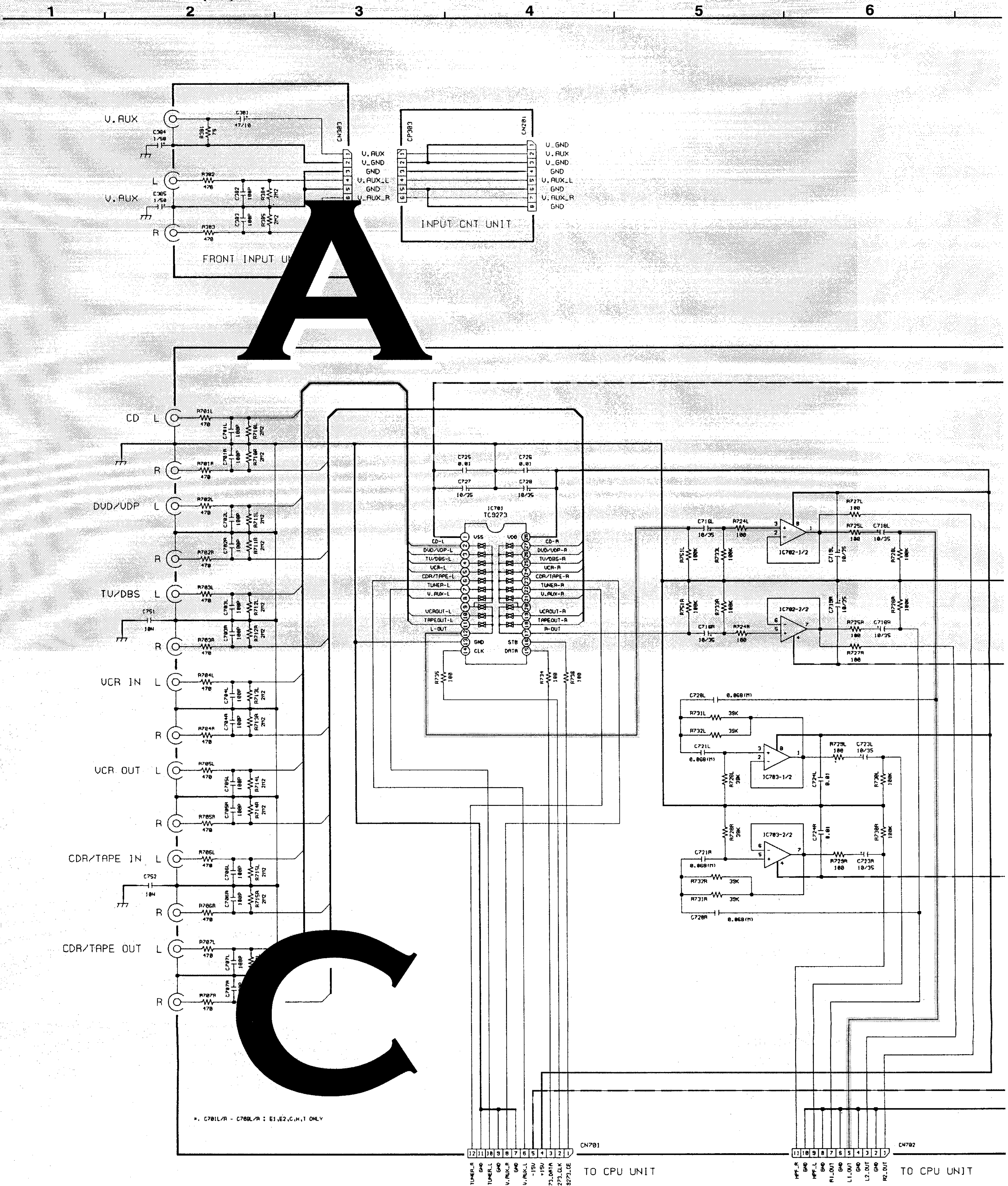
——————— + B LINE
— — — — — - B LINE
▒▒▒▒▒▒▒ SIGNAL LINE

SCHEMATIC DIAGRAMS(1/7)

INPUT P.W.B. UNIT
VIDEO P.W.B. UNIT
S-VIDEO P.W.B. UNIT
FRONT INPUT P.W.B. UNIT
INPUT CNT P.W.B. UNIT

H

SCHEMATIC DIAGRAMS(1/7)


1
2
3
4
5
6
A
C
V.AUX
L
V.AUX
R
FRONT INPUT UNIT
CN303
V.AUX
V_GND
GND
V.AUX_L
GND
V.AUX_R
CP303
CN701
V_GND
V.AUX
V_GND
GND
V.AUX_L
GND
V.AUX_R
GND
INPUT CNT UNIT
CD
DVD/VDP
TU/DBS
VCR IN
VCR OUT
CDR/TAPE IN
CDR/TAPE OUT
IC701
TC9273
IC702-1/2
IC702-2/2
IC703-1/2
IC703-2/2
*. C701L/R - C708L/R : E1,E2,C,H,T ONLY
CN701
TUNER_R
GND
TUNER_L
GND
V.AUX_R
GND
V.AUX_L
-15V
+15V
9273_DATA
9273_CLK
9273_CE
TO CPU UNIT
CN702
HPF_R
GND
HPF_L
GND
R1_OUT
GND
L1_OUT
GND
L2_OUT
GND
R2_OUT
TO CPU UNIT

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
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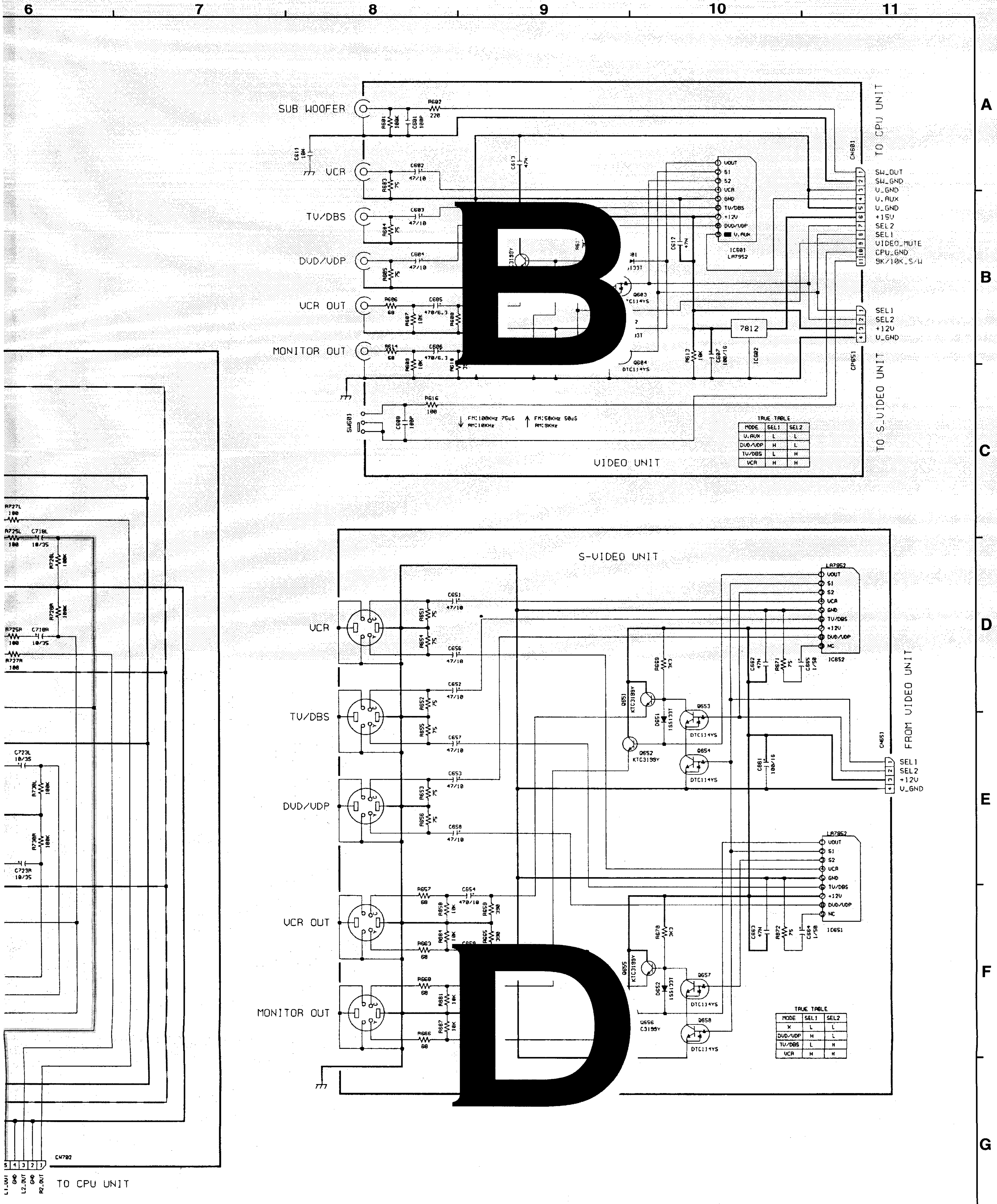

6
7
8
9
10
11
A
B
C
D
E
F
G
SUB WOOFER
VCR
TV/DBS
DVD/VDP
VCR OUT
MONITOR OUT
R601 100K
C601 100P
R607 220
C611 10N
C602 47/10
C603 47/10
C604 47/10
C605 470/6.3
C606 470/6.3
R603 75
R604 75
R605 75
R606 68
R614 68
R616 100
C613 47N
C612 47N
C607 100/16
R617 10K
SW601
C608 100P
FM:100KHz 75uS
AM:10KHz
FM:50KHz 50uS
AM:9KHz
IC601
LA7952
VOUT
S1
S2
VCR
GND
TV/DBS
+12V
DVD/VDP
V.AUX
7812
IC602
Q603
DTC114YS
Q604
DTC114YS
CN601
TO CPU UNIT
SW_OUT
SW_GND
V_GND
V.AUX
V_GND
+15V
SEL2
SEL1
VIDEO_MUTE
CPU_GND
9K/10K_S/W
CP651
SEL1
SEL2
+12V
V_GND
TO S_VIDEO UNIT
VIDEO UNIT
B
S-VIDEO UNIT
VCR
TV/DBS
DVD/VDP
VCR OUT
MONITOR OUT
C651 47/10
C656 47/10
C652 47/10
C657 47/10
C653 47/10
C658 47/10
C654 470/10
R651 75
R654 75
R652 75
R655 75
R653 75
R656 75
R657 68
R658 10K
R659 390
R663 68
R664 10K
R665 390
R660 68
R661 10K
R666 68
R667 10K
R669 3K3
R671 75
C662 47N
C665 1/50
IC652
LA7952
VOUT
S1
S2
VCR
GND
TV/DBS
+12V
DVD/VDP
NC
Q651
KTC3199Y
D651
1SS133T
Q652
KTC3199Y
Q653
DTC114YS
Q654
DTC114YS
C661 100/16
CN651
FROM VIDEO UNIT
SEL1
SEL2
+12V
V_GND
IC651
LA7952
R678 3K3
C663 47N
R672 75
C664 1/50
Q655
KTC3199Y
D652
1SS133T
Q656
C3199Y
Q657
DTC114YS
Q658
DTC114YS
D
R727L 100
R725L 100
C718L 10/35
R720L 100K
R720R 100K
R725R 100
C718R 10/35
R727R 100
C723L 10/35
R730L 100K
R730R 100K
C723R 10/35
CN702
5
4
3
2
1
L1_OUT
GND
L2_OUT
GND
R2_OUT
TO CPU UNIT

TRUE TABLE

MODE	SEL1	SEL2
V.AUX	L	L
DVD/VDP	H	L
TV/DBS	L	H
VCR	H	H

TRUE TABLE

MODE	SEL1	SEL2
X	L	L
DVD/VDP	H	L
TV/DBS	L	H
VCR	H	H

▨ have critical characteristics.
ommended by the manufacture.

stomer, make sure you make either (1) a
to chassis resistance check. If the leakage
if the resistance from chassis to either side
kohms, the unit is defective.

tomer until the problem is located and

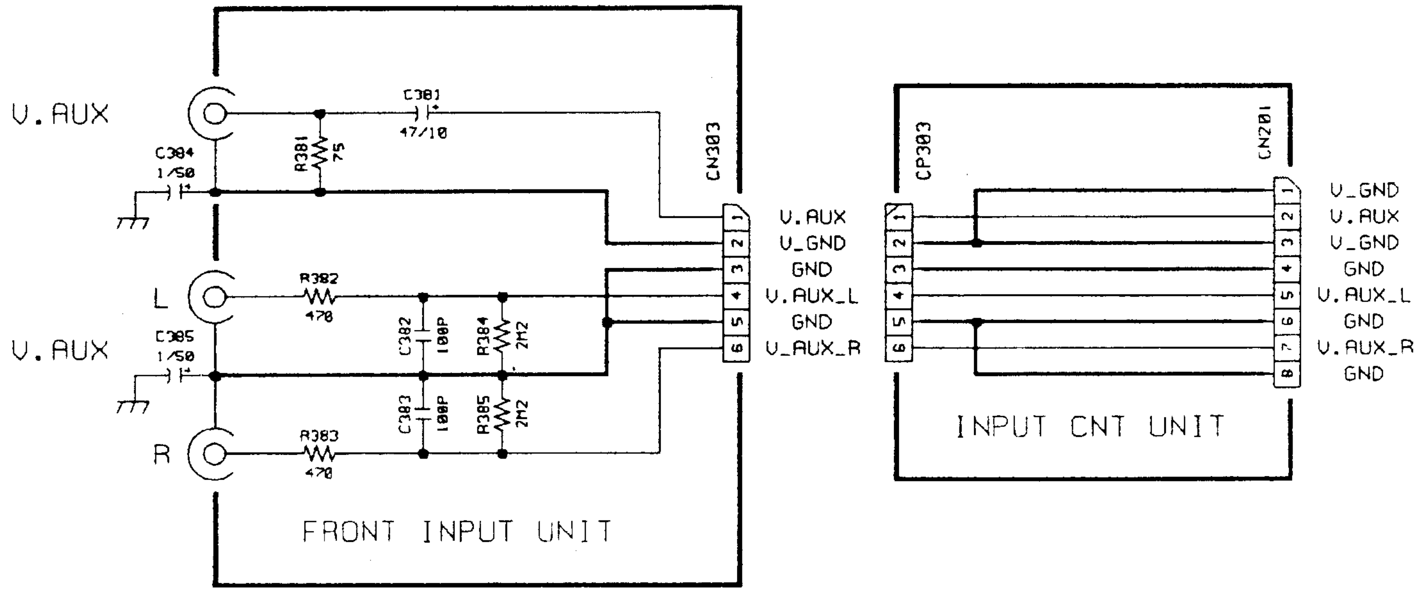
———— + B LINE
— — — – B LINE
▨ SIGNAL LINE

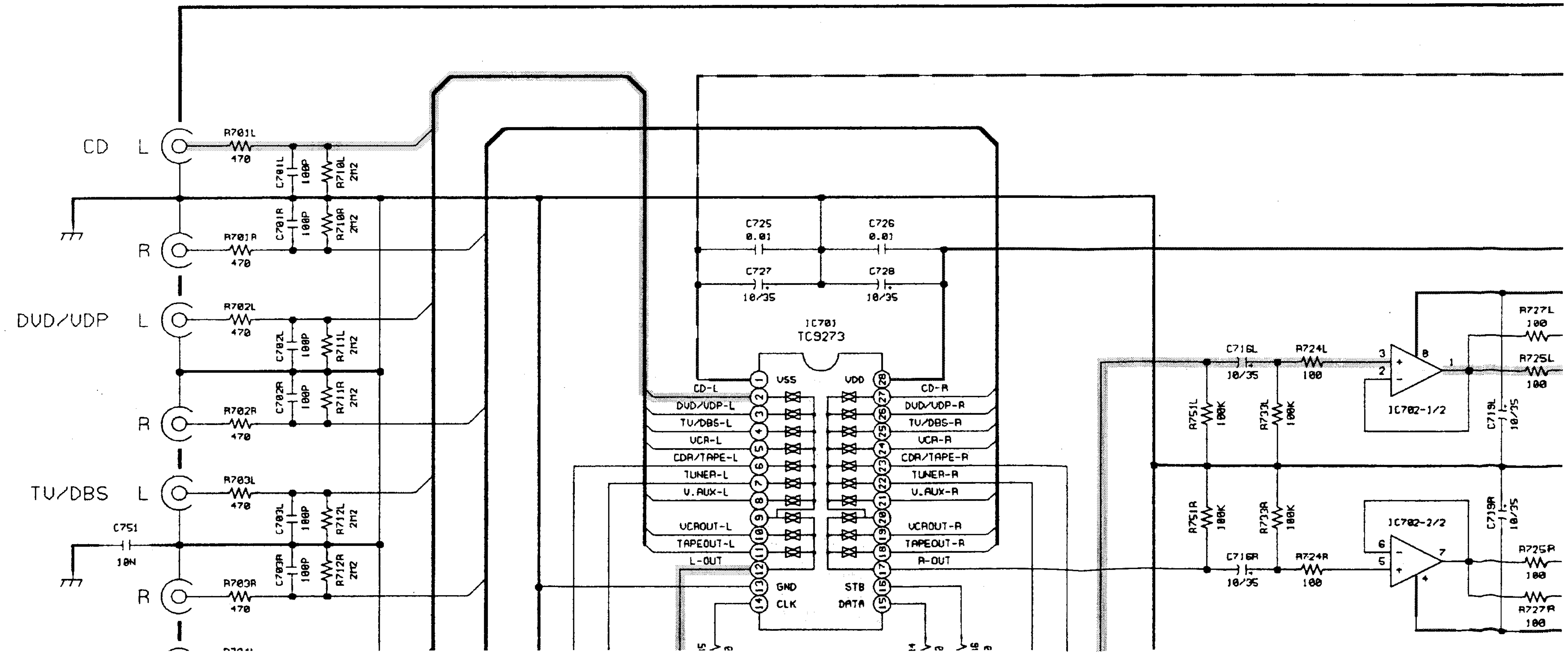
SCHEMATIC DIAGRAMS(1/7)

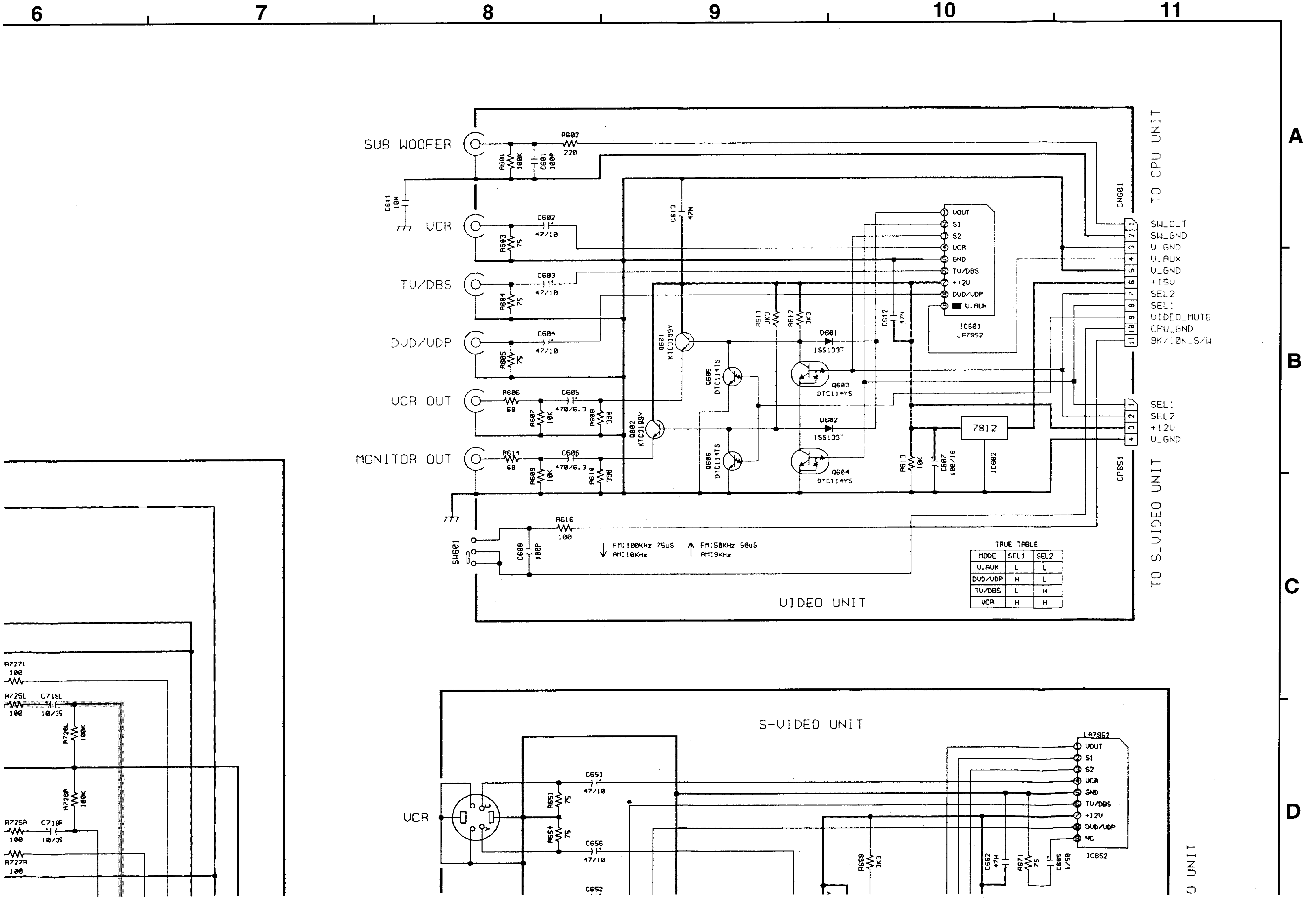
INPUT P.W.B. UNIT
VIDEO P.W.B. UNIT
S-VIDEO P.W.B. UNIT
FRONT INPUT P.W.B. UNIT
INPUT CNT P.W.B. UNIT

SCHEMATIC DIAGRAMS(1/7)

1 2 3 4 5

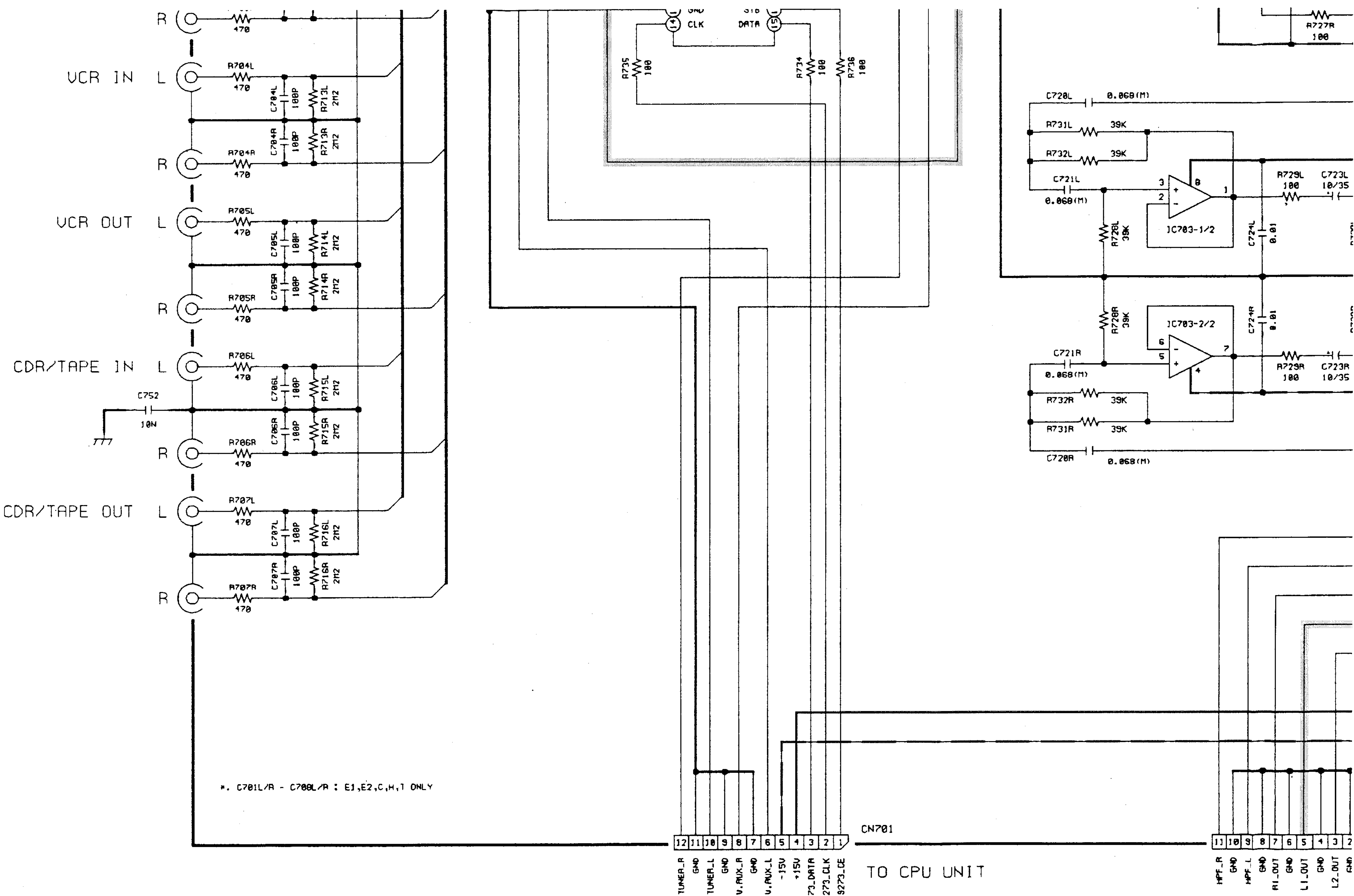

V.AUX
L
V.AUX
R
C304
1/50
C305
1/50
R381
75
C301
47/10
R382
470
R383
470
C382
100P
C383
100P
R384
2M2
R385
2M2
CN303
V.AUX
V_GND
GND
V.AUX_L
GND
V_AUX_R
FRONT INPUT UNIT
CP303
CN201
V_GND
V.AUX
V_GND
GND
V.AUX_L
GND
V.AUX_R
GND
INPUT CNT UNIT


CD L
R
DVD/VDP L
R
TV/DBS L
R
R701L
470
C701L
100P
R710L
2M2
R701R
470
C701R
100P
R710R
2M2
R702L
470
C702L
100P
R711L
2M2
R702R
470
C702R
100P
R711R
2M2
R703L
470
C703L
100P
R712L
2M2
R703R
470
C703R
100P
R712R
2M2
C751
10N
C725
0.01
C726
0.01
C727
10/35
C728
10/35
IC701
TC9273
VSS
VDD
CD-L
DVD/VDP-L
TV/DBS-L
VCR-L
CDR/TAPE-L
TUNER-L
V.AUX-L
VCROUT-L
TAPEOUT-L
L-OUT
GND
CLK
CD-R
DVD/VDP-R
TV/DBS-R
VCR-R
CDR/TAPE-R
TUNER-R
V.AUX-R
VCROUT-R
TAPEOUT-R
R-OUT
STB
DATA
C716L
10/35
R724L
100
R751L
100K
R723L
100K
IC702-1/2
C716R
10/35
R724R
100
R751R
100K
R723R
100K
IC702-2/2
C719L
10/35
C719R
10/35
R727L
100
R725L
100
R725R
100
R727R
100


6
7
8
9
10
11
A
B
C
D
SUB WOOFER
VCR
TV/DBS
DVD/VDP
VCR OUT
MONITOR OUT
R601 100K
C601 100P
R602 220
C611 10N
C602 47/10
R603 75
C603 47/10
R604 75
C604 47/10
R605 75
R606 68
C605 470/6.3
R607 10K
R608 390
R614 68
C606 470/6.3
R609 10K
R610 390
C613 47N
Q601 KTC3199Y
Q602 KTC3199Y
Q605 DTC114TS
Q606 DTC114TS
R611 3K3
R612 3K3
D601 1SS133T
D602 1SS133T
Q603 DTC114YS
Q604 DTC114YS
C612 47N
IC601 LA7952
VOUT
S1
S2
VCR
GND
TV/DBS
+12V
DVD/VDP
V.AUX
7812
IC602
R613 10K
C607 100/16
CN601
TO CPU UNIT
SW_OUT
SW_GND
V_GND
V.AUX
V_GND
+15V
SEL2
SEL1
VIDEO_MUTE
CPU_GND
9K/10K_S/W
CP651
SEL1
SEL2
+12V
V_GND
TO S_VIDEO UNIT
SW601
C608 100P
R616 100
FM:100KHz 75uS AM:10KHz
FM:50KHz 50uS AM:9KHz
VIDEO UNIT
S-VIDEO UNIT
VCR
C651 47/10
R651 75
R654 75
C656 47/10
C652
LA7952
VOUT
S1
S2
VCR
GND
TV/DBS
+12V
DVD/VDP
NC
IC652
R669 3K3
C662 47N
R671 75
C665 1/50
R727L 100
R725L 100
C718L 10/35
R728L 100K
R728R 100K
R725R 100
C718R 10/35
R727R 100
O UNIT

TRUE TABLE

MODE	SEL1	SEL2
V.AUX	L	L
DVD/VDP	H	L
TV/DBS	L	H
VCR	H	H


R
R704L 470
VCR IN
L
C704L 100P
R713L 2M2
C704R 100P
R713R 2M2
R704R 470
R
R705L 470
VCR OUT
L
C705L 100P
R714L 2M2
C705R 100P
R714R 2M2
R705R 470
R
R706L 470
CDR/TAPE IN
L
C706L 100P
R715L 2M2
C752
10N
C706R 100P
R715R 2M2
R706R 470
R
R707L 470
CDR/TAPE OUT
L
C707L 100P
R716L 2M2
C707R 100P
R716R 2M2
R707R 470
R
CLK
DATA
R735 100
R734 100
R736 100
R727R 100
C720L 0.068(M)
R731L 39K
R732L 39K
C721L 0.068(M)
R728L 39K
IC703-1/2
R729L 100
C723L 10/35
C724L 0.01
R728R 39K
IC703-2/2
C724R 0.01
C721R 0.068(M)
R729R 100
C723R 10/35
R732R 39K
R731R 39K
C720R 0.068(M)
*. C701L/R - C708L/R : E1,E2,C,H,I ONLY
CN701
12 11 10 9 8 7 6 5 4 3 2 1
TUNER_R
GND
TUNER_L
GND
V.AUX_R
GND
V.AUX_L
-15V
+15V
9273_DATA
9273_CLK
9273_CE
TO CPU UNIT
11 10 9 8 7 6 5 4 3 2
HPF_R
GND
HPF_L
GND
R1_OUT
GND
L1_OUT
GND
L2_OUT

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

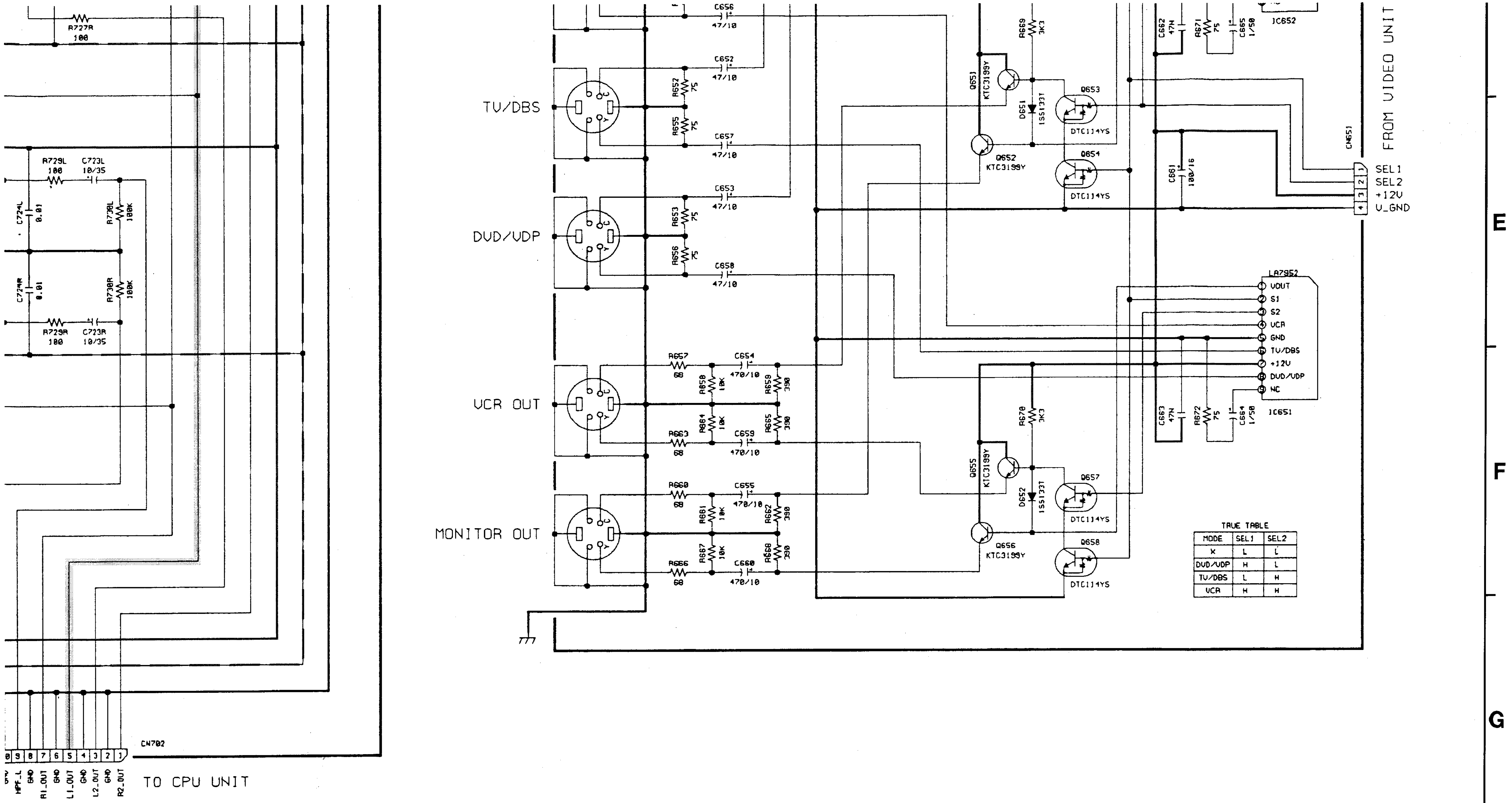
Parts marked with this symbol ⚠ ▨ ha
Use ONLY replacement parts recommer

CAUTION:

Before returning the unit to the customer
leakage current check or (2) a line to cha
current exceeds 0.5 milliamps, or if the r
of the power card is less than 460kohms

WARNING:

DO NOT return the unit to the customer
corrected.


R727R
100
R729L
100
C723L
10/35
C724L
0.01
R730L
100K
C724R
0.01
R730R
100K
R729R
100
C723R
10/35
CN702
MPE_L
GND
R1_OUT
GND
L1_OUT
GND
L2_OUT
GND
R2_OUT
TO CPU UNIT
TV/DBS
DVD/VDP
VCR OUT
MONITOR OUT
C656
47/10
C652
47/10
R652
75
R655
75
C657
47/10
C653
47/10
R653
75
R656
75
C658
47/10
R657
68
C654
470/10
R658
10K
R659
390
R664
10K
R665
390
R663
68
C659
470/10
R660
68
C655
470/10
R661
10K
R662
390
R667
10K
R668
390
R666
68
C660
470/10
R669
3K3
Q651
KTC3199Y
D651
1SS133T
Q653
DTC114YS
Q652
KTC3199Y
Q654
DTC114YS
C662
47N
R671
75
C665
1/50
IC652
C661
100/16
CN651
FROM VIDEO UNIT
SEL1
SEL2
+12V
V_GND
LA7952
VOUT
S1
S2
VCR
GND
TV/DBS
+12V
DVD/VDP
NC
C663
47N
R672
75
C664
1/50
IC651
R670
3K3
Q655
KTC3199Y
D652
1SS133T
Q657
DTC114YS
Q656
KTC3199Y
Q658
DTC114YS
E
F
G
H

TRUE TABLE

MODE	SEL1	SEL2
X	L	L
DVD/VDP	H	L
TV/DBS	L	H
VCR	H	H

ymbol ⚠ ▨ have critical characteristics.
parts recommended by the manufacture.

it to the customer, make sure you make either (1) a
r (2) a line to chassis resistance check. If the leakage
liamps, or if the resistance from chassis to either side
s than 460kohms, the unit is defective.

to the customer until the problem is located and

——— + B LINE

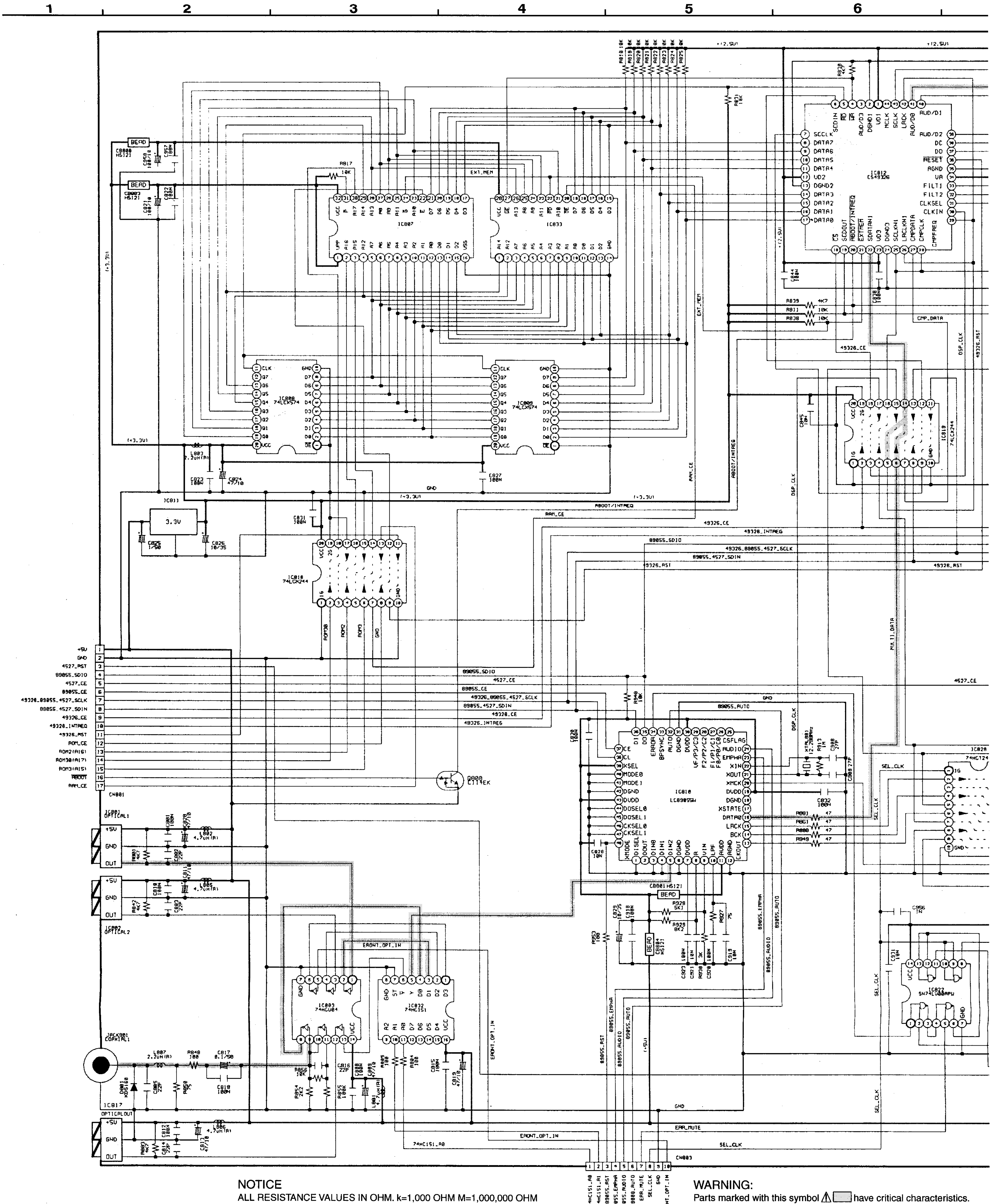
— — — - B LINE

▨ SIGNAL LINE

SCHEMATIC DIAGRAMS(1/7)

INPUT P.W.B. UNIT
VIDEO P.W.B. UNIT
S-VIDEO P.W.B. UNIT
FRONT INPUT P.W.B. UNIT
INPUT CNT P.W.B. UNIT

SCHEMATIC DIAGRAMS(2/7)


1
2
3
4
5
6
IC807
IC833
IC808 74LCX574
IC809 74LCX574
IC810 74LCX244
IC811
3.3V
IC812 CS49326
IC819 74LCX244
IC810 LC89055W
IC803 74HCU04
IC832 74HC151
IC822 SN74LC08APW
IC828 74HC24
Q808 KTC114EK
EXT_MEM
RAM_CE
ABOOT/INTREQ
49326_CE
49326_INTREQ
89055_SDIO
49326_89055_4527_SCLK
89055_4527_SDIN
49326_RST
MIX_11_DATA
DSP_CLK
CMP_DATA
4527_CE
89055_AUDIO
SEL_CLK
FRONT_OPT_IN
+5V
GND
4527_RST
89055_SDIO
4527_CE
89055_CE
49326_89055_4527_SCLK
88055_4527_SDIN
49326_CE
49326_INTREQ
49326_RST
ROM_CE
ROM2(A16)
ROM30(A17)
ROM3(A15)
ABOOT
RAM_CE
CN801
IC801 OPTICAL1
IC802 OPTICAL2
JACK801 COAXIAL1
IC817 OPTICALOUT
ERR_MUTE
74HC151_A0
CN803
74HC151_A0
74HC151_A1
89055_RST
89055_EMPHA
89055_AUDIO
59000_AUTO
ERR_MUTE
SEL_CLK
GND
FRONT_OPT_IN

NOTICE

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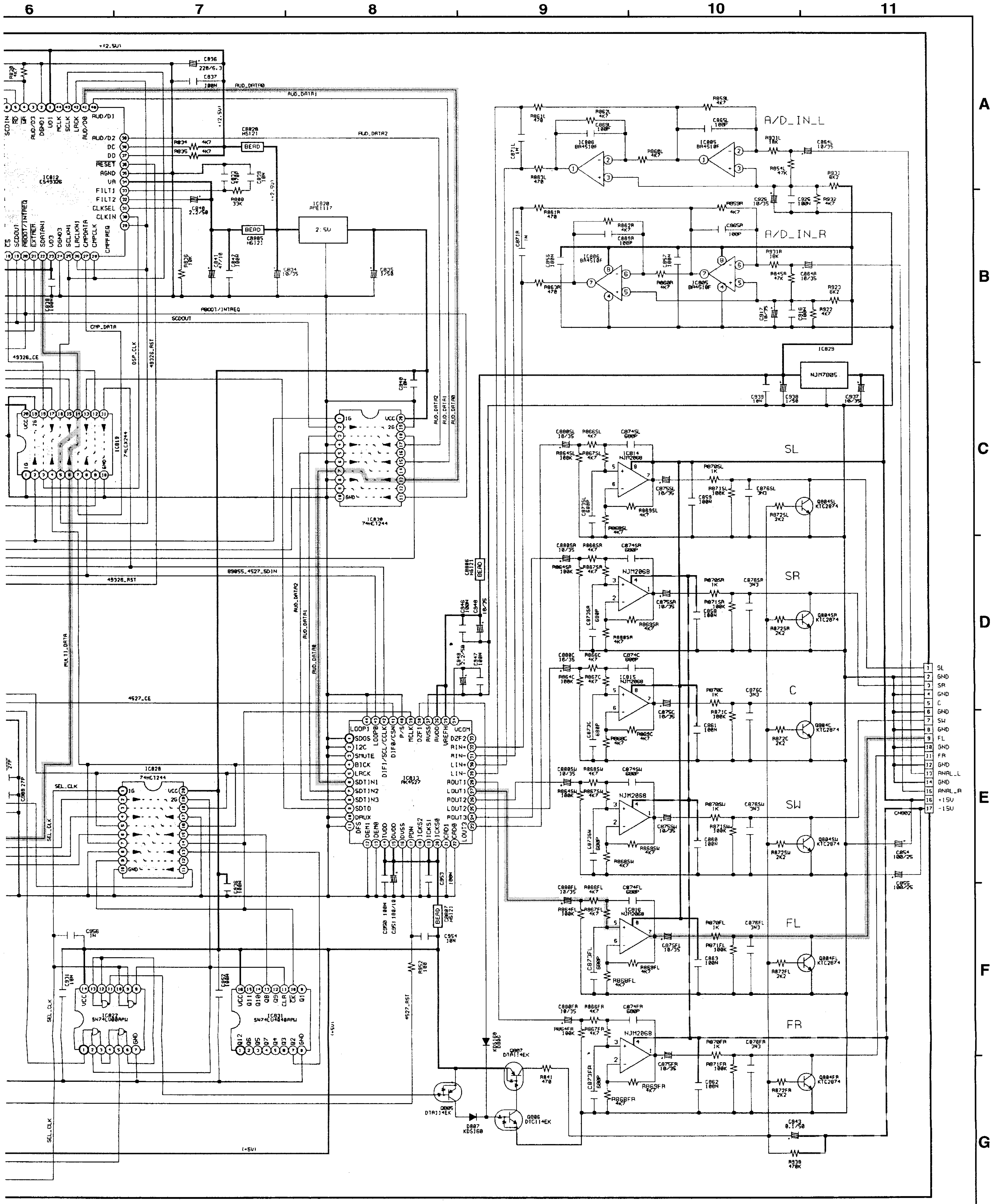
CAUTION:

Before returning the unit to the customer, make sure you make either (
leakage current check or (2) a line to chassis resistance check. If the le
current exceeds 0.5 milliamps, or if the resistance from chassis to eithe
of the power card is less than 460kohms, the unit is defective.

WARNING:

DO NOT return the unit to the customer until the problem is located an
corrected.


6
7
8
9
10
11
A
B
C
D
E
F
G
IC812 CS49326
IC820 AME1117
2.5V
BEAD
IC830 74HC1244
IC819 74LCX244
IC813 AK4527
IC828 74HC1244
IC827 SN74LV08APW
IC831 SN74LV4040APW
A/D_IN_L
A/D_IN_R
IC806 BA4510F
IC805 BA4510F
IC829
NJM7805
IC814 NJM2068
IC815 NJM2068
IC816 NJM2068
NJM2068
SL
SR
C
SW
FL
FR
Q804SL KTC2874
Q804SR KTC2874
Q804C KTC2874
Q804SW KTC2874
Q804FL KTC2874
Q804FR KTC2874
Q805 DTA114EK
Q806 DTC114EK
Q807 DTA114EK
D807 KDS160
AUD_DATA0
AUD_DATA1
AUD_DATA2
ABOOT/INTREQ
SCDOUT
CMP_DATA
DSP_CLK
49326_CE
49326_RST
89055_4527_SDIN
4527_CE
4527_RST
MULTI_DATA
SEL.CLK
(+5V)
(+2.5V)
1 SL
2 GND
3 SR
4 GND
5 C
6 GND
7 SW
8 GND
9 FL
10 GND
11 FR
12 GND
13 ANAL_L
14 GND
15 ANAL_R
16 +15V
17 -15V
CN902

▒ have critical characteristics.
ommended by the manufacture.

stomer, make sure you make either (1) a
to chassis resistance check. If the leakage
if the resistance from chassis to either side
kohms, the unit is defective.

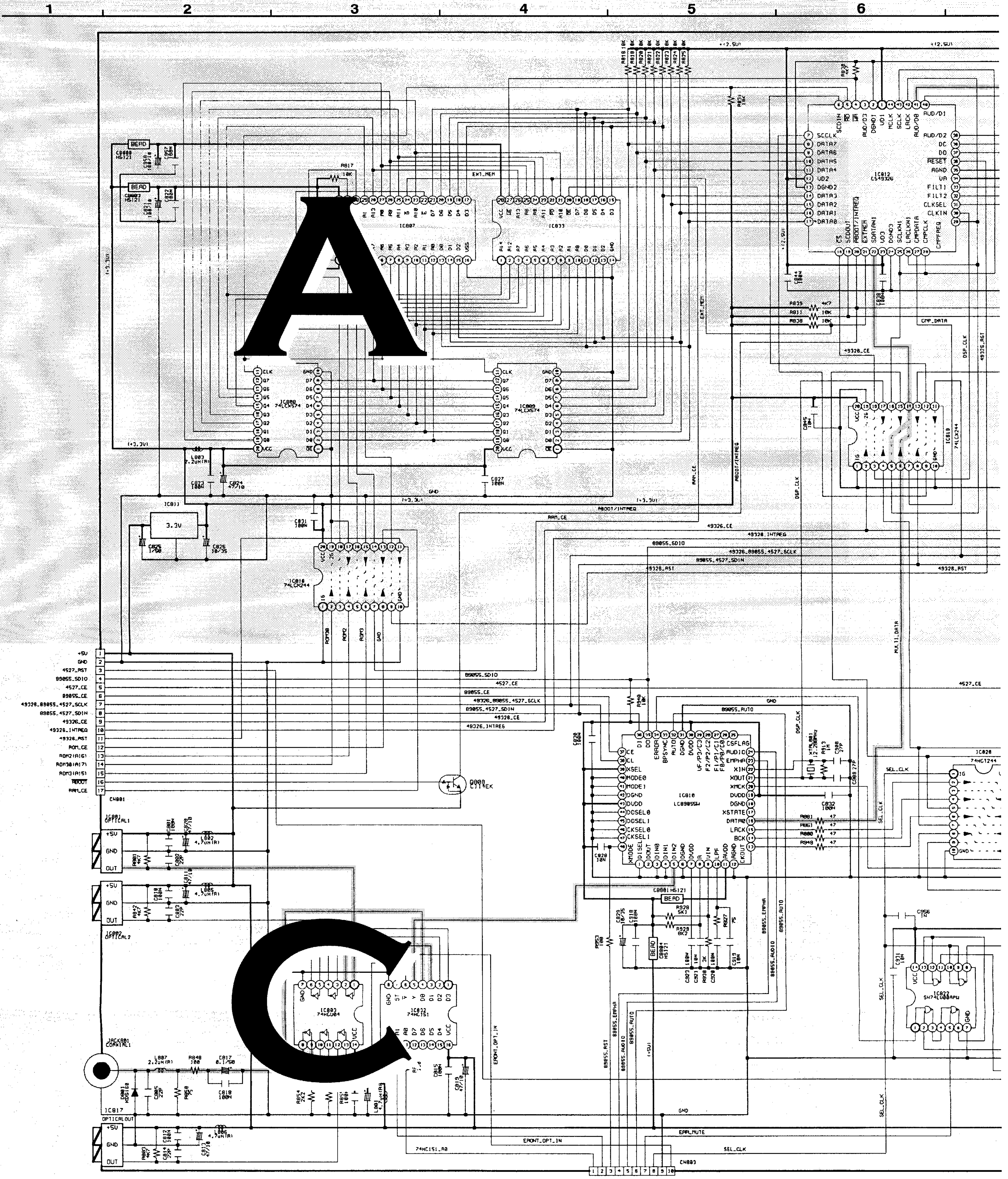
stomer until the problem is located and

——— + B LINE
— — — – B LINE
▒▒▒ SIGNAL LINE

SCHEMATIC DIAGRAMS(2/7)
DSP P.W.B. UNIT

H

SCHEMATIC DIAGRAMS(2/7)


1
2
3
4
5
6
A
C
IC807
IC833
IC808 74LCX574
IC809 74LCX574
IC811
3.3V
IC816 74LCX244
IC812 CS4932G
IC819 74LCX244
IC810 LC89055W
IC803 74HCU04
IC832 74HC151
IC820 74HC1244
IC822 SN74LC08APW
CN801
CN803
IC801 OPTICAL1
IC802 OPTICAL2
IC817 OPTICALOUT
JACK801 COAXIAL1
Q800 LTC114EK
XTAL801
EXT_MEM
CMP_DATA
DSP_CLK
RAM_CE
ABOOT/INTREQ
49326_CE
49326_INTREQ
89055_SDIO
49326_89055_4527_SCLK
89055_4527_SDIN
49326_RST
4527_CE
89055_AUTO
89055_AUDIO
89055_EMPHA
89055_RST
EAR_MUTE
SEL_CLK
FRONT_OPT_IN
74HC151_A0
74HC151_A1
+5V
GND
4527_RST
89055_SDIO
4527_CE
89055_CE
49326_89055_4527_SCLK
89055_4527_SDIN
49326_CE
49326_INTREQ
49326_RST
ROM_CE
ROM2(A16)
ROM30(A17)
ROM31(A15)
ABOOT
RAM_CE
74HC151_A0
74HC151_A1
89055_RST
89055_EMPHA
89055_AUDIO
59088_AUDIO
EAR_MUTE
SEL_CLK
GND
FRONT_OPT_IN

NOTICE
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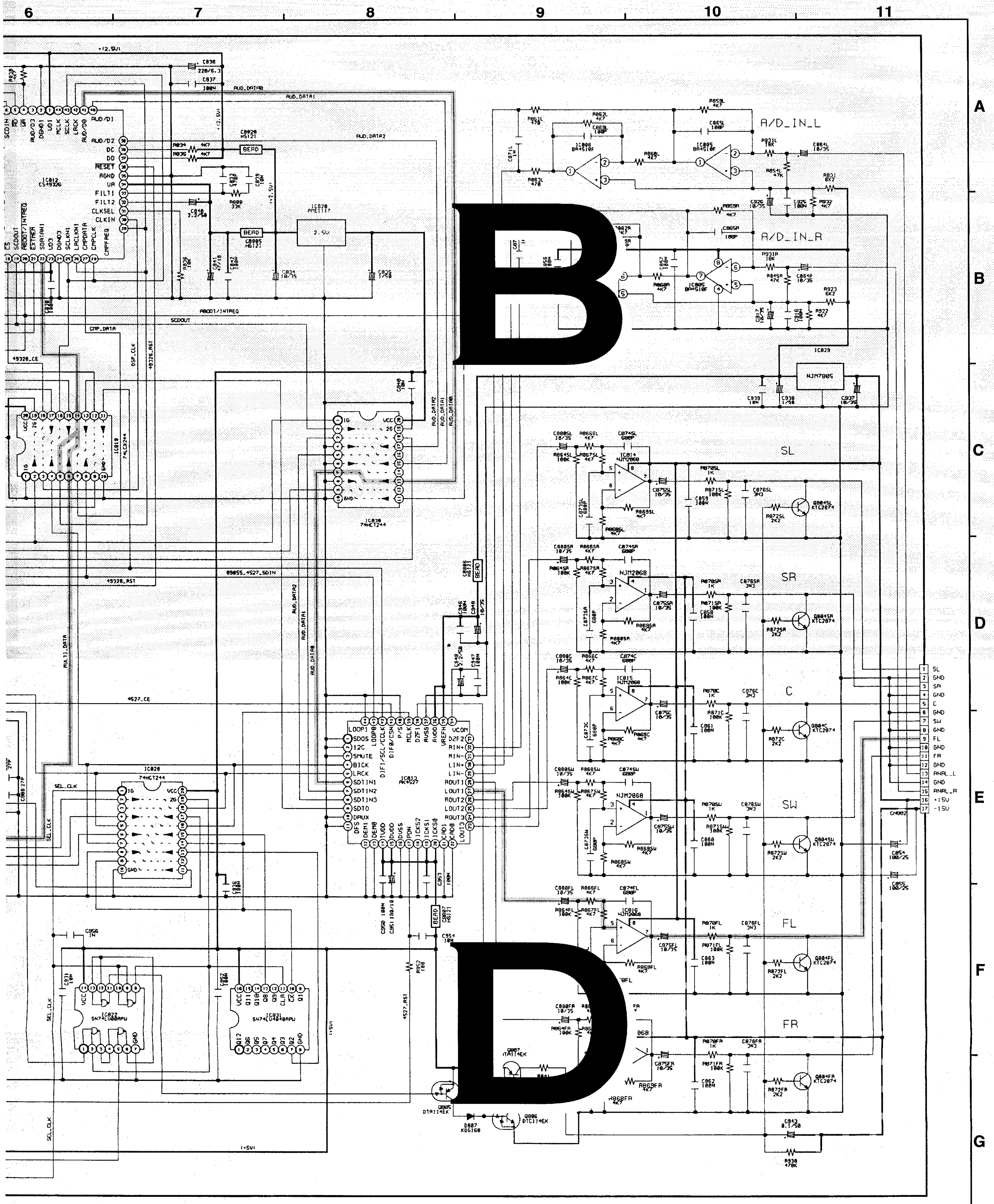
CAUTION:
Before returning the unit to the customer, make sure you make either (1) leakage current check or (2) a line to chassis resistance check. If the lea current exceeds 0.5 milliamps, or if the resistance from chassis to either of the power card is less than 460kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.


6
7
8
9
10
11
A
B
C
D
E
F
G
B
D
IC012 CS4932G
IC020 AME1117
2.5V
BEAD
IC019 74LCX244
IC030 74HC1244
IC028 74HC1244
IC013 AK4527
IC022 SN74LU08APW
IC031 SN74LU4040APW
IC006 BA4510F
IC005 BA4510F
A/D_IN_L
A/D_IN_R
IC029 NJM7805
IC014 NJM2068
IC015 NJM2068
IC016 NJM2068
NJM2068
SL
SR
C
SW
FL
FR
Q004SL KTC2874
Q004SR KTC2874
Q004C KTC2874
Q004SW KTC2874
Q004FL KTC2874
Q004FR KTC2874
Q005 DTA114EK
Q006 DTC114EK
Q007 DTA114EK
D007 KDS160
CN902
1 SL
2 GND
3 SR
4 GND
5 C
6 GND
7 SW
8 GND
9 FL
10 GND
11 FR
12 GND
13 ANAL_L
14 GND
15 ANAL_R
16 +15V
17 -15V
AUD_DATA0
AUD_DATA1
AUD_DATA2
AD001/INTREQ
SCDOUT
CMP_DATA
DSP_CLK
4932B_RST
4932B_CE
4527_CE
4527_RST
89055_4527_SDIN
MULTI_DATA
SEL_CLK
(+5V)
(+2.5V)

▨ have critical characteristics.
ommended by the manufacture.

stomer, make sure you make either (1) a
to chassis resistance check. If the leakage
if the resistance from chassis to either side
kohms, the unit is defective.

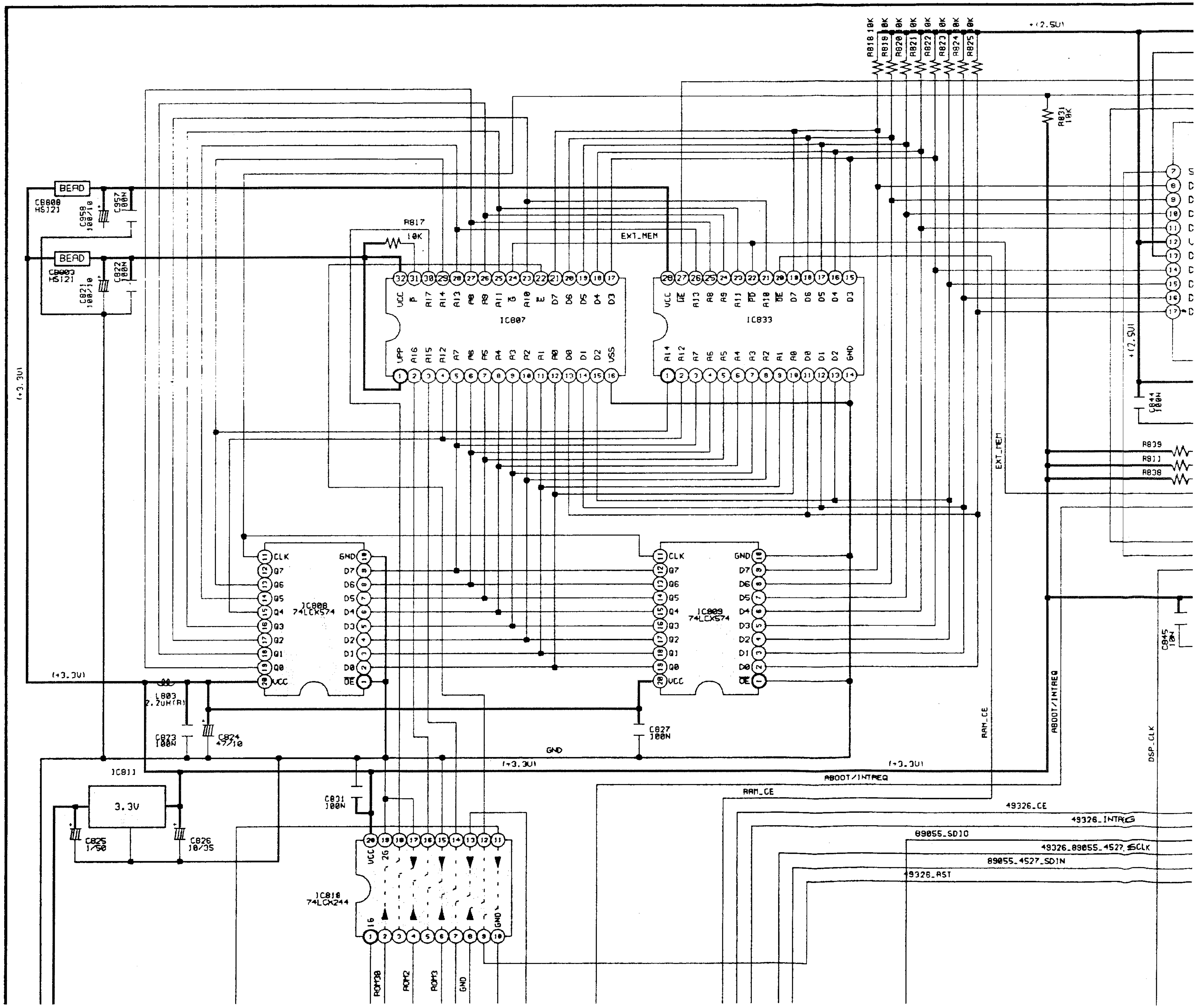
tomer until the problem is located and

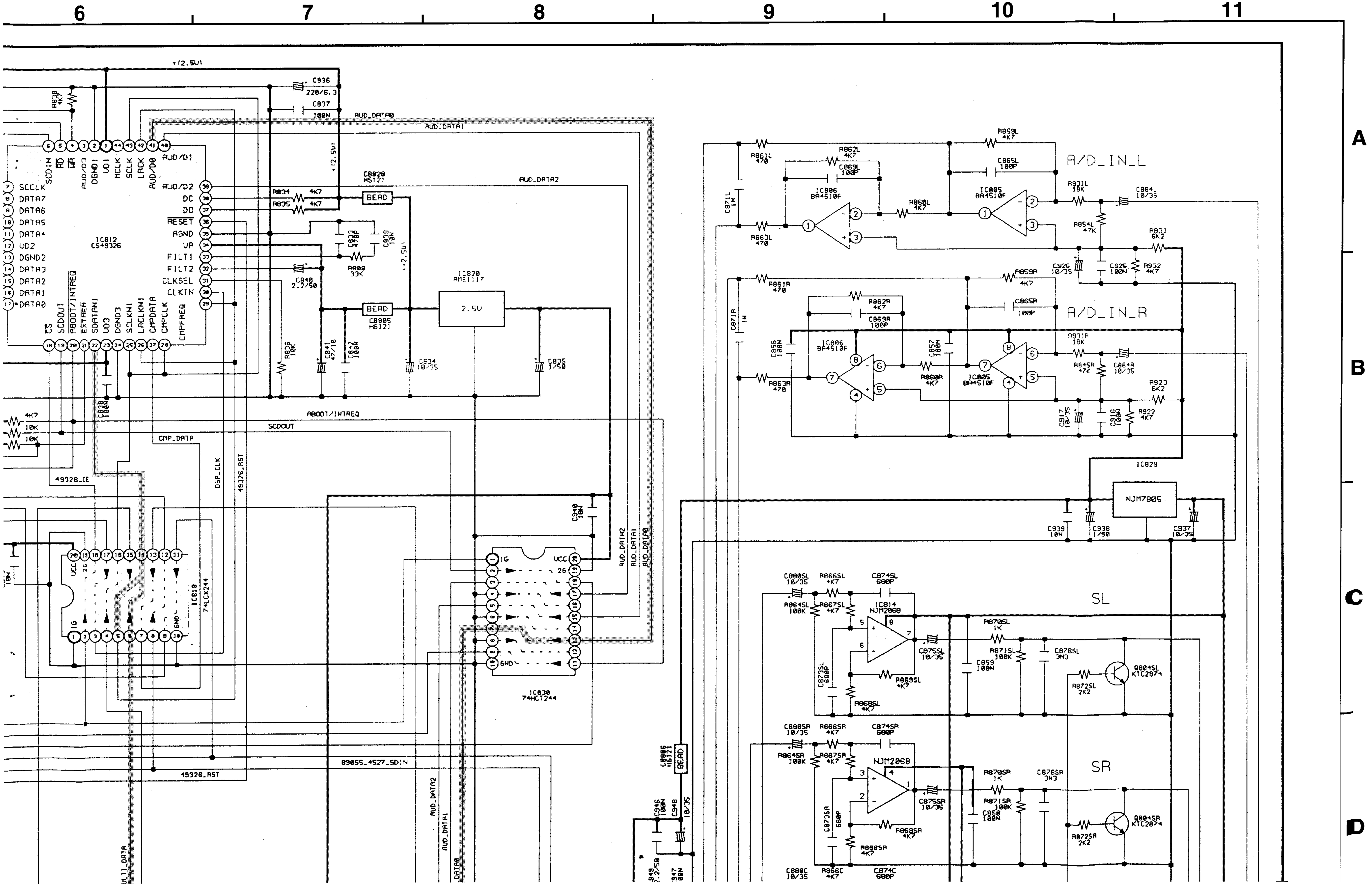
——— + B LINE
— — — - B LINE
▨ SIGNAL LINE

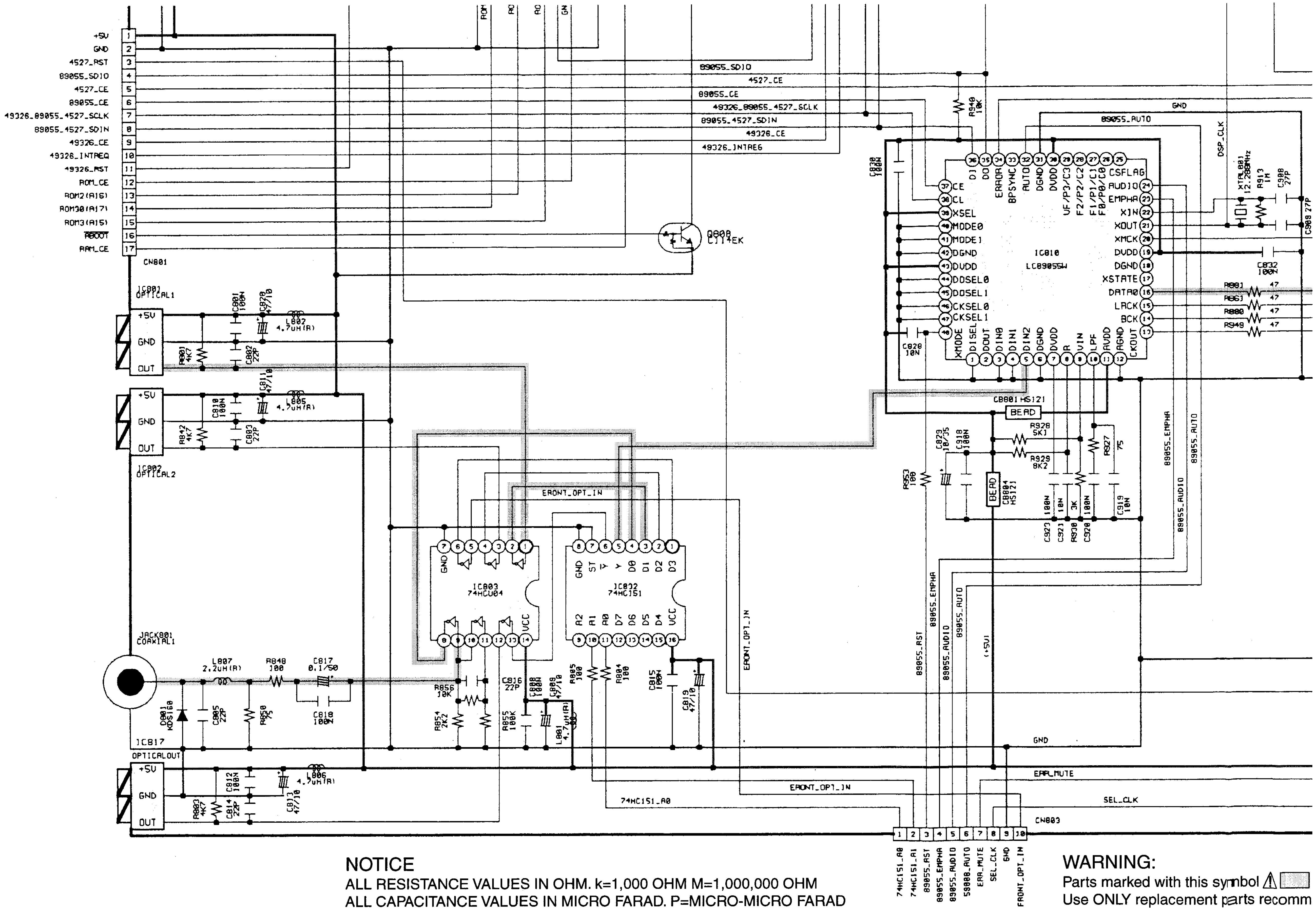
SCHEMATIC DIAGRAMS(2/7)
DSP P.W.B. UNIT

SCHEMATIC DIAGRAMS(2/7)

1 2 3 4 5


(+3.3V)
BEAD
C8808
HS121
C958
100/10
C957
100N
BEAD
C8803
HS121
C821
100/10
C822
100N
R817
10K
EXT_MEM
IC807
VCC
P
A17
A14
A13
A8
A9
A11
G
A10
E
D7
D6
D5
D4
D3
VPP
A16
A15
A12
A7
A6
A5
A4
A3
A2
A1
A0
D0
D1
D2
VSS
IC833
VCC
WE
A13
A8
A9
A11
PD
A10
OE
D7
D6
D5
D4
D3
A14
A12
A7
A6
A5
A4
A3
A2
A1
A0
D0
D1
D2
GND
R818 10K
R819 10K
R820 10K
R821 10K
R822 10K
R823 10K
R824 10K
R825 10K
+(2.5V)
R831
10K
+(2.5V)
C844
100N
R839
R811
R838
EXT_MEM
IC808
74LCX574
CLK
Q7
Q6
Q5
Q4
Q3
Q2
Q1
Q0
VCC
GND
D7
D6
D5
D4
D3
D2
D1
D0
OE
IC809
74LCX574
CLK
Q7
Q6
Q5
Q4
Q3
Q2
Q1
Q0
VCC
GND
D7
D6
D5
D4
D3
D2
D1
D0
OE
(+3.3V)
L803
2.2UH(R)
C873
100N
C824
47/10
C827
100N
GND
(+3.3V)
(+3.3V)
ABOOT/INTREQ
RAM_CE
ABOOT/INTREQ
DSP_CLK
C845
10N
IC811
3.3V
C825
1/50
C826
10/35
C831
100N
IC810
74LCX244
VCC
2G
16
GND
ROM30
ROM2
ROM3
GND
RAM_CE
49326_CE
49326_INTREQ
89055_SDIO
49326_89055_4527_SCLK
89055_4527_SDIN
49326_RST


6
7
8
9
10
11
A
B
C
D
+(2.5V)
R830 4K7
C836 220/6.3
C837 100N
AUD_DATA0
AUD_DATA1
AUD_DATA2
+(2.5V)
SCDIN
RD
WR
AUD/D3
DGND1
VD1
MCLK
SCLK
LRCK
AUD/D0
AUD/D1
AUD/D2
DC
DD
RESET
AGND
VA
FILT1
FILT2
CLKSEL
CLKIN
SCCLK
DATA7
DATA6
DATA5
DATA4
VD2
DGND2
DATA3
DATA2
DATA1
DATA0
IC812
CS49326
CS
SCDOUT
ABOOT/INTREQ
EXTMEM
SDATAN1
VD3
DGND3
SCLKN1
LRCLKN1
CMPDATA
CMPCLK
CMPFREQ
R834 4K7
R835 4K7
CB828 HS121
BEAD
C833 470P
C839 10N
R808 33K
C840 2.2/50
CB805 HS121
IC820 AME1117
2.5V
R836 10K
C841 47/10
C842 100N
C834 10/35
C835 1/50
C838 100N
4K7
10K
10K
ABOOT/INTREQ
SCDOUT
CMP_DATA
DSP_CLK
49326_RST
49326_CE
IC819
74LCX244
VCC
26
1G
GND
C940 10N
IC830
74HCT244
1G
VCC
26
GND
89055_4527_SDIN
49326_RST
ULTI_DATA
AUD_DATA2
AUD_DATA1
AUD_DATA0
R861L 470
R862L 4K7
C869L 100P
C871L 1N
R863L 470
IC806 BA4510F
R860L 4K7
R859L 4K7
C865L 100P
IC805 BA4510F
A/D_IN_L
R931L 10K
C864L 10/35
R854L 47K
R933 6K2
C926 10/35
C925 100N
R932 4K7
R861R 470
R862R 4K7
C869R 100P
R859R 4K7
C865R 100P
A/D_IN_R
C871R 1N
C856 100N
IC806 BA4510F
R863R 470
C857 100N
R860R 4K7
IC805 BA4510F
R931R 10K
R845R 47K
C864R 10/35
R923 6K2
C917 10/35
C916 100N
R922 4K7
IC829
NJM7805
C939 10N
C938 1/50
C937 10/35
C880SL 10/35
R866SL 4K7
C874SL 680P
R864SL 100K
R867SL 4K7
IC814 NJM2068
SL
R870SL 1K
C875SL 10/35
C859 100N
R871SL 100K
C876SL 3N3
Q804SL KTC2874
R872SL 2K2
C873SL 680P
R869SL 4K7
R868SL 4K7
C880SR 10/35
R866SR 4K7
C874SR 680P
R864SR 100K
R867SR 4K7
NJM2068
SR
R870SR 1K
C876SR 3N3
C875SR 10/35
R871SR 100K
C858 100N
Q804SR KTC2874
R872SR 2K2
C873SR 680P
R869SR 4K7
R868SR 4K7
CB806 HS121
BEAD
C946 100N
C948 10/35
C880C 10/35
R866C 4K7
C874C 680P
2.2/50
947
00N


+5V
GND
4527_RST
89055_SDIO
4527_CE
89055_CE
49326_89055_4527_SCLK
89055_4527_SDIN
49326_CE
49326_INTREQ
49326_RST
ROM_CE
ROM2(A16)
ROM30(A17)
ROM3(A15)
RBOOT
RAM_CE
CN801
Q808
CJ14EK
IC801
OPTICAL1
C801 100N
C970 47/10
L802 4.7uH(R)
R801 4K7
C802 22P
IC802
OPTICAL2
C810 100N
C811 47/10
L805 4.7uH(R)
R842 4K7
C803 22P
JACK801
COAXIAL1
L807 2.2uH(R)
R840 100
C817 0.1/50
C818 100N
D801 KDS160
C805 22P
R850 75
IC817
OPTICALOUT
C812 100N
C814 22P
R803 4K7
L806 4.7uH(R)
C813 47/10
R856 10K
R854 2K2
R855 100K
C816 22P
C808 100N
C809 47/10
L801 4.7uH(R)
R805 100
R804 100
C815 100N
C819 47/10
IC803
74HCU04
IC832
74HC151
GND ST Y Y D0 D1 D2 D3
A2 A1 A0 D7 D6 D5 D4 VCC
FRONT_OPT_IN
74HC151_A0
89055_SDIO
4527_CE
89055_CE
49326_89055_4527_SCLK
89055_4527_SDIN
49326_CE
49326_INTRE6
R940 10K
C830 100N
GND
89055_AUTO
DSP_CLK
IC810
LC89055W
CE CL XSEL MODE0 MODE1 DGND DVDD DDSEL0 DDSEL1 CKSEL0 CKSEL1 XMODE
DI DO ERROR BPSYNC AUTO DGND DVDD UF/P2/C3 F2/P2/C2 F1/P1/C1 F0/P0/C0 CSFLAG
AUDIO EMPHA XIN XOUT XMCK DVDD DGND XSTATE DATA0 LRCK BCK CKOUT
DISEL DOUT DIN0 DIN1 DIN2 DGND DVDD R VIN LPF AVDD AGND
XTAL801 12.288MHz
R913 1M
C908 27P
C909 27P
C832 100N
R881 47
R861 47
R880 47
R949 47
C820 10N
CB801 HS121
BEAD
R928 5K1
R929 8K2
R927 75
C829 10/35
C918 100N
R953 100
CB804 HS121
C923 100N
C921 10N
R930 3K
C920 100N
C919 10N
89055_EMPHA
89055_AUTO
89055_AUDIO
89055_RST
(+5V)
GND
EAR_MUTE
SEL_CLK
CN803
74HC151_A0
74HC151_A1
89055_RST
89055_EMPHA
89055_AUDIO
59088_AUTO
EAR_MUTE
SEL_CLK
GND
FRONT_OPT_IN

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

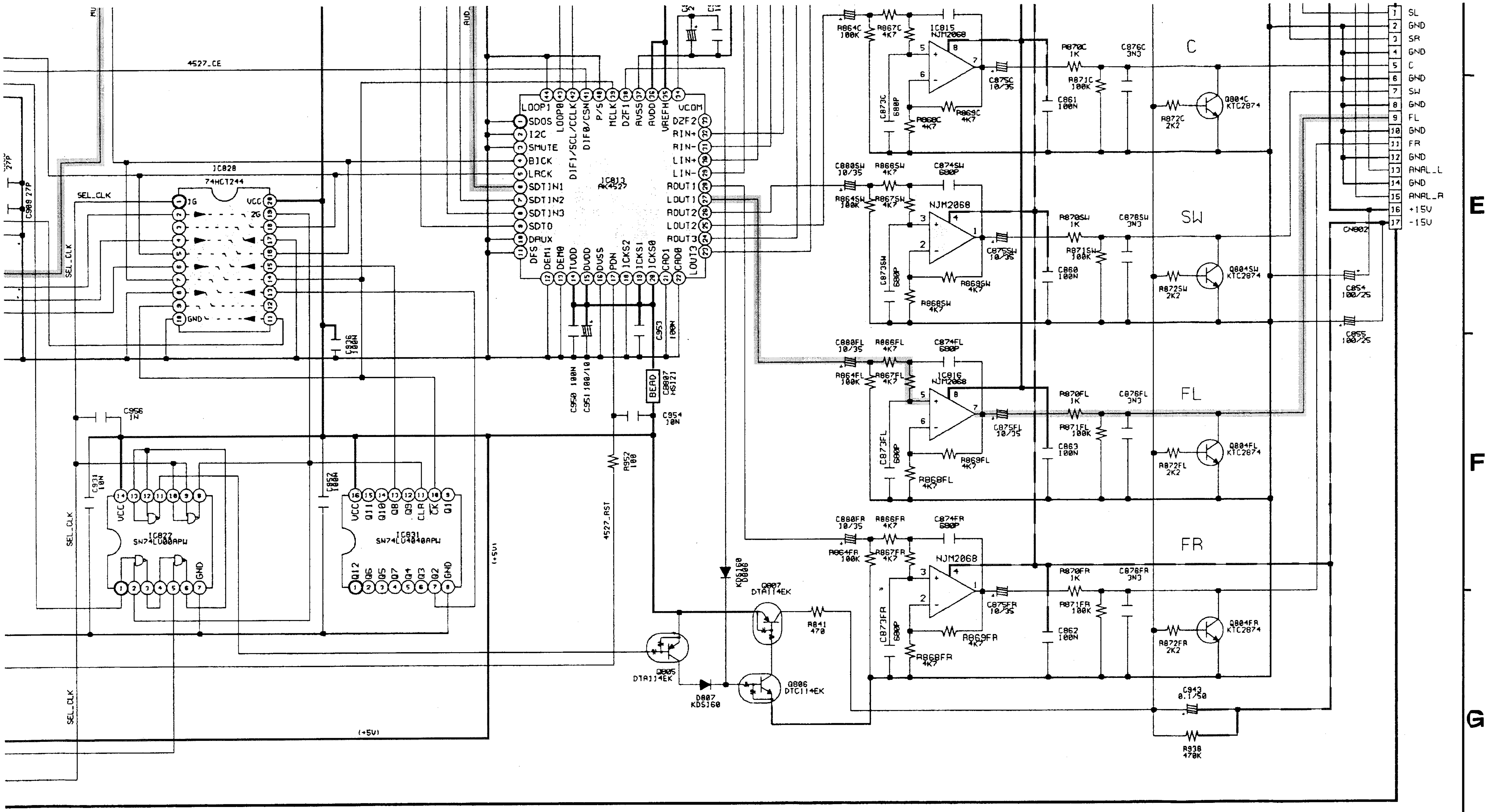
Parts marked with this symbol ⚠
Use ONLY replacement parts recomm

CAUTION:

Before returning the unit to the custom
leakage current check or (2) a line to c
current exceeds 0.5 milliamps, or if the
of the power card is less than 460kohr

WARNING:

DO NOT return the unit to the custome
corrected.


4527_CE
SEL_CLK
IC828
74HCT244
1G
2G
VCC
GND
IC813
AK4527
LOOP1
SDOS
I2C
SMUTE
BICK
LRCK
SDTIN1
SDTIN2
SDTIN3
SDTO
DAUX
DFS
DEM1
DEM0
TVDD
DVDD
DVSS
PDN
ICKS2
ICKS1
ICKS0
CAD1
CAD0
LOUT3
ROUT3
LOUT2
ROUT2
LOUT1
ROUT1
LIN-
LIN+
RIN-
RIN+
DZF2
VCOM
VREFH
AVDD
AVSS
DZF1
MCLK
P/S
DIF0/CSN
DIF1/SCL/CCLK
LOOP0
C936 100N
C950 100N
C951 100/10
C953 100N
BEAD
C8007 HS121
C954 10N
C956 1N
C931 10N
IC827
SN74LV00APW
C952 100N
IC831
SN74LV4040APW
VCC
Q11
Q10
Q8
Q9
CLR
CK
Q1
Q12
Q6
Q5
Q7
Q4
Q3
Q2
GND
(+5V)
R952 100
4527_RST
D806 KDS160
Q807 DTA114EK
Q805 DTA114EK
D807 KDS160
Q806 DTC114EK
R841 470
R864C 100K
R867C 4K7
IC815 NJM2068
C873C 680P
R868C 4K7
R869C 4K7
C875C 10/35
C861 100N
R870C 1K
R871C 100K
C876C 3N3
R872C 2K2
Q804C KTC2874
C
C880SW 10/35
R866SW 4K7
C874SW 680P
R864SW 100K
R867SW 4K7
NJM2068
C873SW 680P
R868SW 4K7
R869SW 4K7
C875SW 10/35
C860 100N
R870SW 1K
R871SW 100K
C878SW 3N3
R872SW 2K2
Q804SW KTC2874
SW
C880FL 10/35
R866FL 4K7
C874FL 680P
R864FL 100K
R867FL 4K7
IC816 NJM2068
C873FL 680P
R868FL 4K7
R869FL 4K7
C875FL 10/35
C863 100N
R870FL 1K
R871FL 100K
C876FL 3N3
R872FL 2K2
Q804FL KTC2874
FL
C880FR 10/35
R866FR 4K7
C874FR 680P
R864FR 100K
R867FR 4K7
NJM2068
C873FR 680P
R868FR 4K7
R869FR 4K7
C875FR 10/35
C862 100N
R870FR 1K
R871FR 100K
C878FR 3N3
R872FR 2K2
Q804FR KTC2874
FR
C943 0.1/50
R938 470K
C854 100/25
C855 100/25
CN802
SL
GND
SR
GND
C
GND
SW
GND
FL
GND
FR
GND
ANAL_L
GND
ANAL_R
+15V
-15V
E
F
G

▨ have critical characteristics.
ommended by the manufacture.

stomer, make sure you make either (1) a
e to chassis resistance check. If the leakage
if the resistance from chassis to either side
kohms, the unit is defective.

stomer until the problem is located and

——— + B LINE

– – – – B LINE

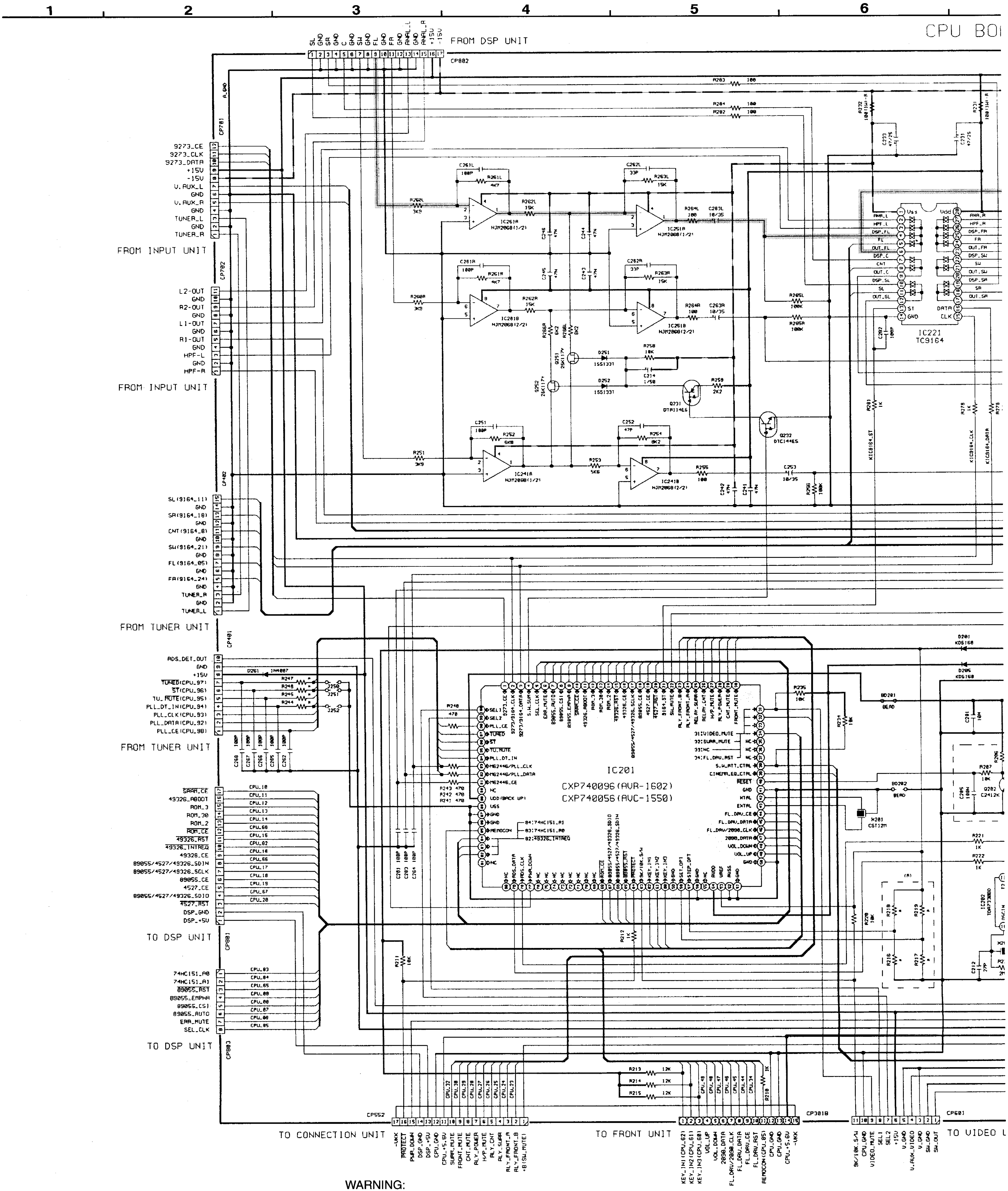
▨ SIGNAL LINE

SCHEMATIC DIAGRAMS(2/7)

DSP P.W.B. UNIT

H

SCHEMATIC DIAGRAMS(3/7)


1
2
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4
5
6
CPU BO
FROM DSP UNIT
CP802
SL GND SR GND C GND SW GND FL GND FR GND ANAL_L GND ANAL_R +15V -15V
CP701
9273_CE
9273_CLK
9273_DATA
+15V
-15V
V.AUX_L
GND
V.AUX_R
GND
TUNER_L
GND
TUNER_R
FROM INPUT UNIT
CP702
L2-OUT
GND
R2-OUT
GND
L1-OUT
GND
R1-OUT
GND
HPF-L
GND
HPF-R
FROM INPUT UNIT
CP402
SL(9164_11)
GND
SR(9164_10)
GND
CNT(9164_8)
GND
SW(9164_21)
GND
FL(9164_05)
GND
FR(9164_24)
GND
TUNER_R
GND
TUNER_L
FROM TUNER UNIT
CP401
RDS_DET_OUT
GND
+15V
TUNED(CPU_97)
ST(CPU_96)
TU_MUTE(CPU_95)
PLL_DT_IN(CPU_94)
PLL_CLK(CPU_93)
PLL_DATA(CPU_92)
PLL_CE(CPU_98)
FROM TUNER UNIT
SARA_CE
49326_ABOOT
ROM_3
ROM_30
ROM_2
ROM_CE
49326_RST
49326_INTREQ
49326_CE
89055/4527/49326_SDIN
89055/4527/49326_SCLK
89055_CE
4527_CE
89055/4527/49326_SDIO
4527_RST
DSP_GND
DSP_+5V
TO DSP UNIT
CP801
74HC151_A0
74HC151_A1
89055_RST
89055_EMPHA
89055_CS1
89055_AUTO
EAR_MUTE
SEL_CLK
TO DSP UNIT
CP803
IC261A NJM2068(1/2)
IC261B NJM2068(2/2)
IC251A NJM2068(1/2)
IC251B NJM2068(2/2)
IC241A NJM2068(1/2)
IC241B NJM2068(2/2)
Q251 2SK117Y
Q252 2SK117Y
D251 1SS133T
D252 1SS133T
Q231 DTA114ES
Q232 DTC144ES
IC221 TC9164
IC201
CXP740096(AVR-1602)
CXP740056(AVC-1550)
X201 CST12M
BD201 BEAD
BD202 BEAD
D201 KDS160
D205 KDS160
Q202 C2412K
IC202 TDA7308D
R203 100
R204 100
R202 100
R205L 100K
R205R 100K
R272 100(1/4)-R
R231 100(1/4)-R
C273 47/25
C271 47/25
R260L 3K9
R260R 3K9
R261L 4K7
R261R 4K7
R262L 15K
R262R 15K
R263L 15K
R263R 15K
R264L 100
R264R 100
C261L 100P
C261R 100P
C262L 33P
C262R 33P
C263L 10/35
C263R 10/35
C246 47N
C244 47N
C245 47N
C243 47N
R265R 6K2
R266L 6K2
R258 10K
C214 1/50
R259 2K2
R281 1K
C202 100P
C251 100P
R252 6K8
C252 47P
R254 8K2
R251 3K9
R253 5K6
R255 100
C242 47N
C241 47N
C253 10/35
R256 100K
R247
R248
R245
R244
J250
J251
J252
D261 1N4007
C268 100P
C267 100P
C266 100P
C265 100P
C262 100P
R240 470
R243 470
R242 470
R241 470
C281 100P
C283 100P
C264 100P
R211 10K
R212 1K
R235 10K
R234 10K
R213 12K
R214 12K
R215 12K
R210 1K
R220 10K
R218
R219
R216
R217
R221 1K
R222 1K
C212 27P
C201 10N
C205 100N
R207 10K
K19164_ST
K1C9164_CLK
K1C9164_DATA
CP552
TO CONNECTION UNIT
-VKK
PROTECT
PWR_DOWN
DSP_+5V
CPU_GND
CPU_+5.6V
SURR_MUTE
CNT_MUTE
RLY_POWER
H/P_MUTE
RLY_CNT
RLY_SURR
RLY_FRONT_B
RLY_FRONT_A
+B(SW_MUTE)
CP301B
TO FRONT UNIT
KEY_IN1(CPU_62)
KEY_IN2(CPU_61)
KEY_IN3(CPU_60)
VOL_UP
VOL_DOWN
2098_DATA
2098_CLK
FL_DRV/2098_CLK
FL_DRV/2098_DATA
FL_DRV_CE
FL_DRV_RST
REMOCON(CPU_85)
CPU_GND
CPU_GND
CPU_+5.6V
-VKK
CP601
TO VIDEO U
SK/10K_S/W
CPU_GND
VIDEO_MUTE
SEL1
SEL2
+15V
V_GND
V.AUX_VIDEO
SW_GND
SW_OUT

WARNING:

Parts marked with this symbol ⚠ ▭ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

CAUTION:

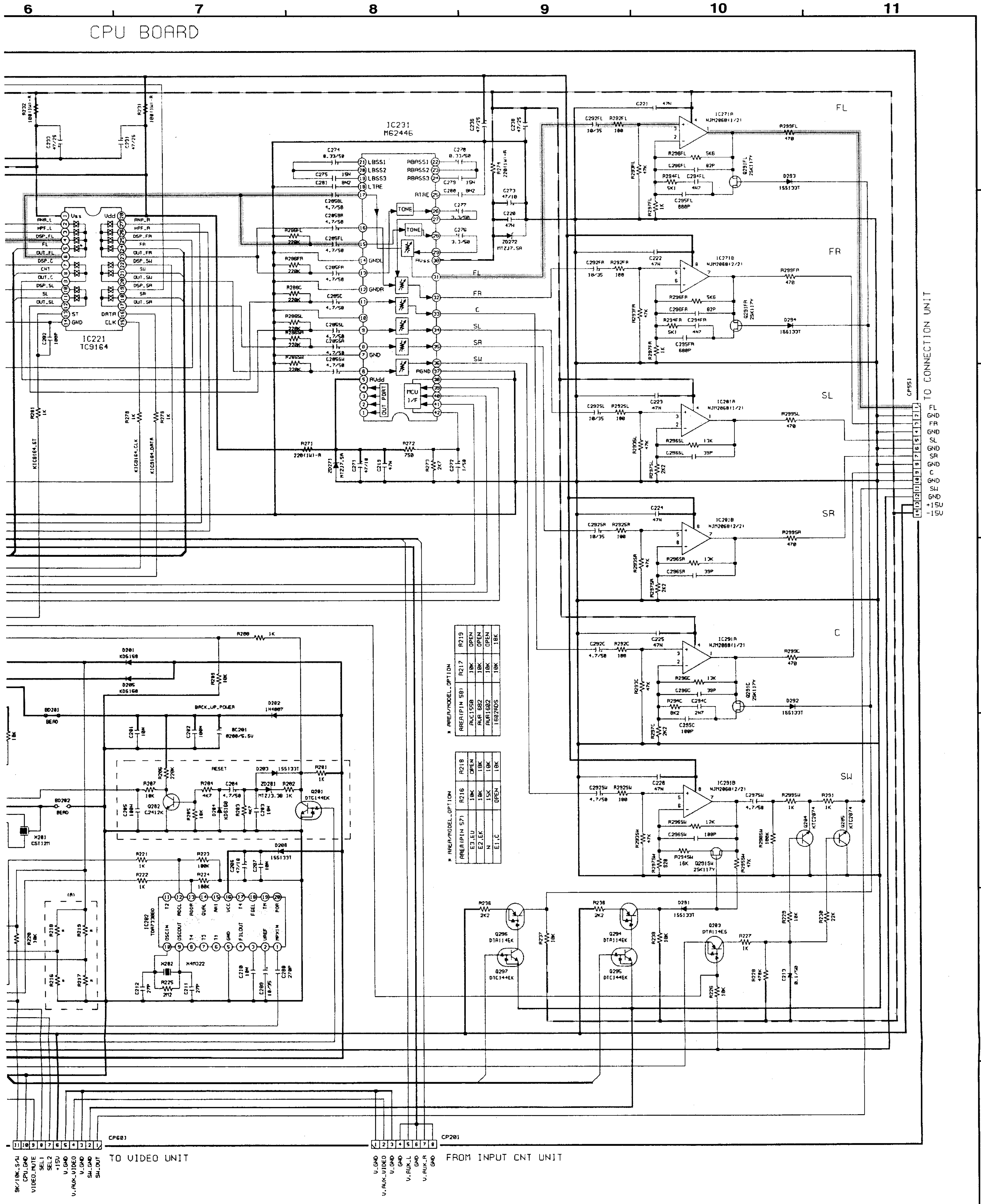
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MI
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SI
CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOU
NOTICE.


6
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A
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F
G
CPU BOARD
IC231
M62446
IC221
TC9164
IC271A NJM2068(1/2)
IC271B NJM2068(2/2)
IC281A NJM2068(1/2)
IC281B NJM2068(2/2)
IC291A NJM2068(1/2)
IC291B NJM2068(2/2)
IC202 TDA7330BD
FL
FR
C
SL
SR
SW
TONE
MCU I/F
OUT PORT
BACK_UP_POWER
RESET
CP551
TO CONNECTION UNIT
FL
GND
FR
GND
SL
GND
SR
GND
C
GND
SW
GND
+15V
-15V
CP601
TO VIDEO UNIT
CP201
FROM INPUT CNT UNIT
V.GND
V.AUX_VIDEO
V.GND
V.AUX_L
GND
V.AUX_R
GND
CPU_GND
VIDEO_MUTE
SEL1
SEL2
+15V
V.GND
V.AUX_VIDEO
V.GND
SW_GND
SW_OUT
KIC9164_ST
KIC9164_CLK
KIC9164_DATA

* AREA/MODEL_OPTION

AREA(PIN 58)	R217	R219
AVC1550	10K	OPEN
AVR 682	10K	OPEN
AVR1602	10K	OPEN
1602RDS	10K	10K

* AREA/MODEL_OPTION

AREA(PIN 57)	R216	R218
E3,EU	10K	OPEN
E2,EK	10K	10K
N	15K	10K
E1,C	OPEN	10K

ES IN OHM. k=1,000 OHM M=1,000,000 OHM
UES IN MICRO FARAD. P=MICRO-MICRO FARAD
JRRENT ARE MEASUERD AT MO SIGNAL INPUT

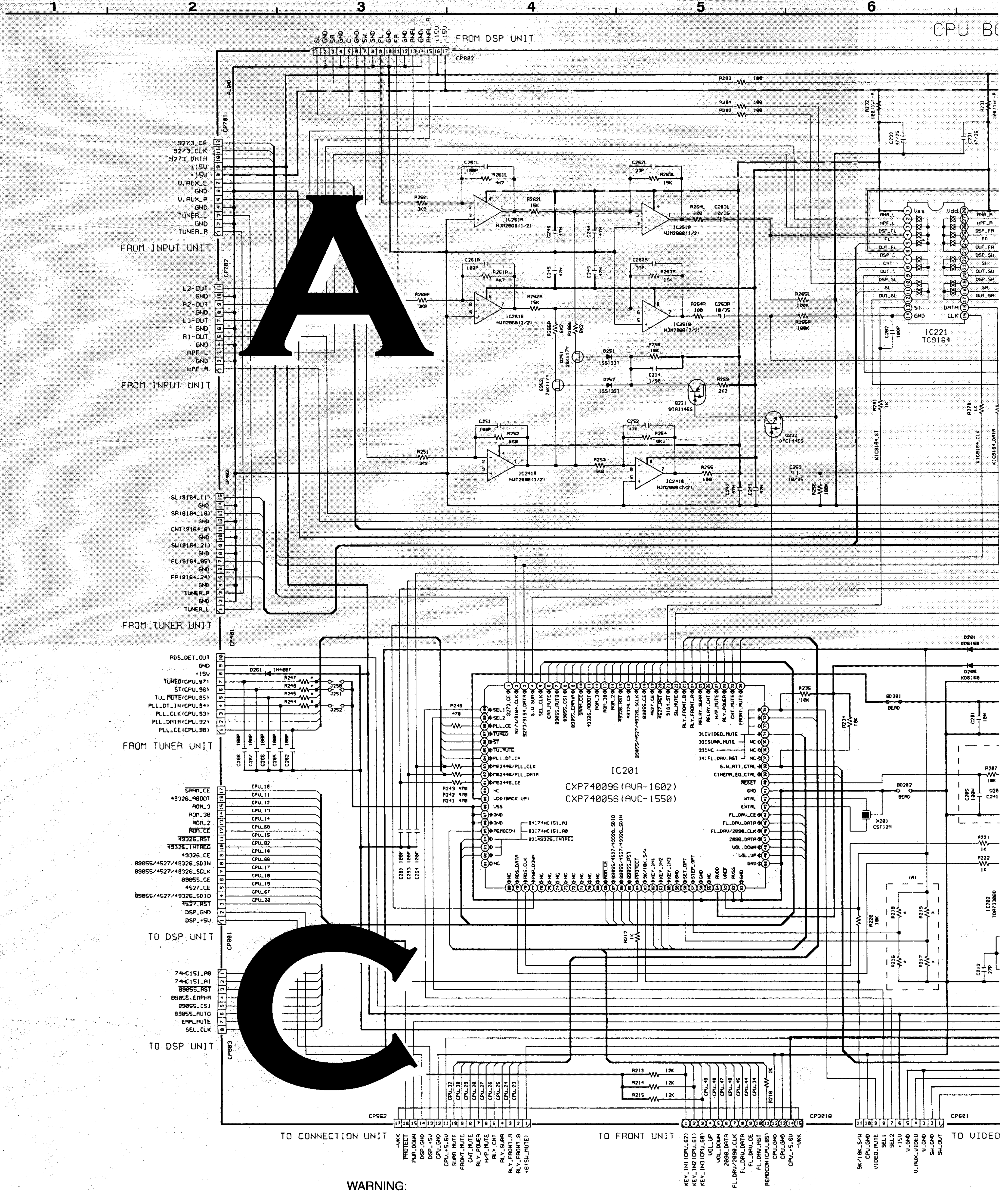
RE SUBJECT TO CHANGE WITHOUT PRIOR

——— + B LINE
— — — - B LINE
▨ SIGNAL LINE

SCHEMATIC DIAGRAMS(3/7)
CPU P.W.B. UNIT

H

SCHEMATIC DIAGRAMS(3/7)


1
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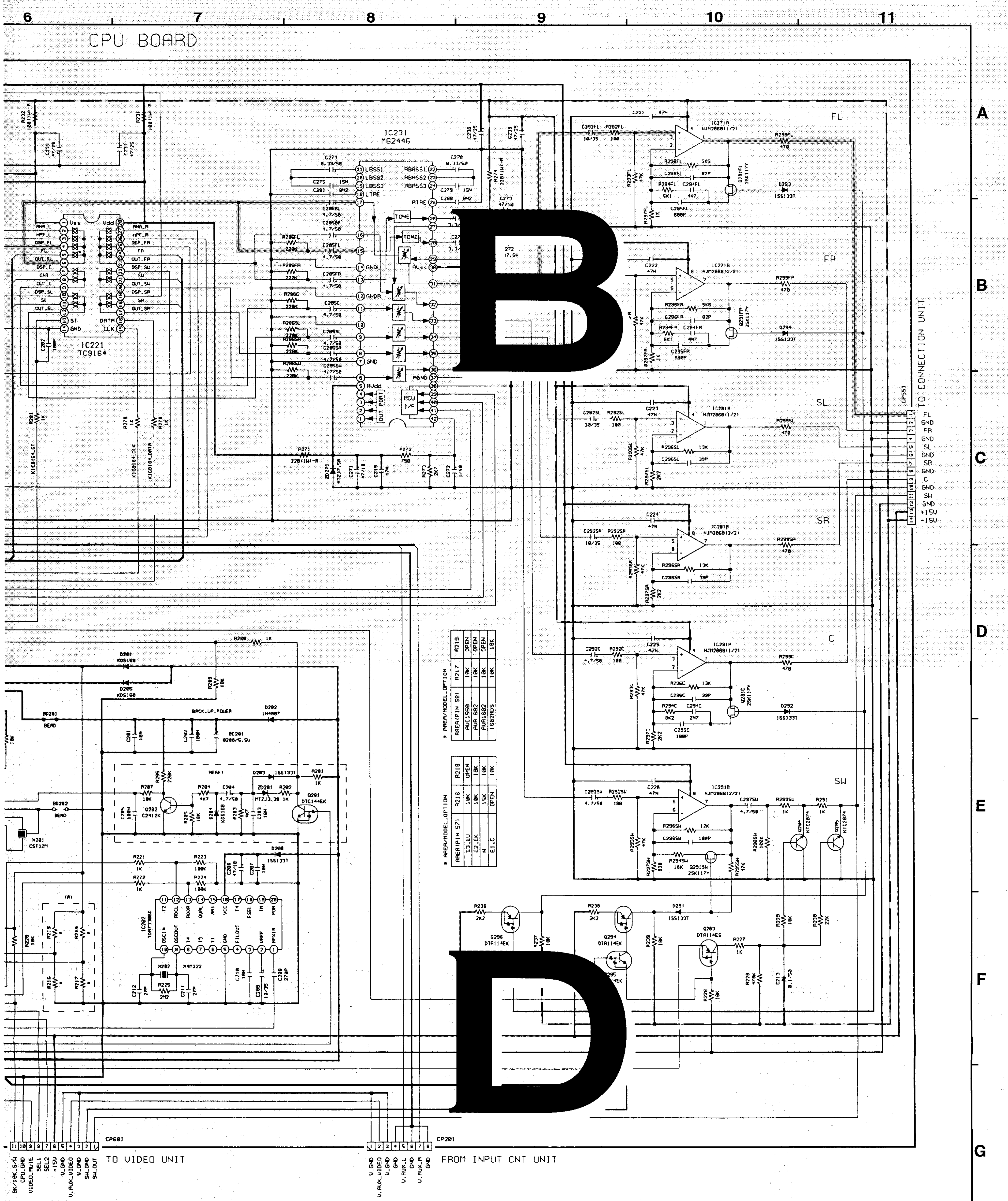
6
CPU BO
FROM DSP UNIT
CP802
SL
GND
SR
GND
C
GND
SW
GND
FL
GND
FR
GND
ANAL_L
GND
ANAL_R
+15V
-15V
CP701
9273_CE
9273_CLK
9273_DATA
+15V
-15V
V.AUX_L
GND
V.AUX_R
GND
TUNER_L
GND
TUNER_R
FROM INPUT UNIT
CP702
L2-OUT
R2-OUT
L1-OUT
R1-OUT
HPF-L
HPF-R
FROM INPUT UNIT
CP402
SL(9164_11)
SR(9164_10)
CNT(9164_8)
SW(9164_21)
FL(9164_05)
FR(9164_24)
TUNER_R
TUNER_L
FROM TUNER UNIT
CP401
RDS_DET_OUT
+15V
TUNED(CPU_97)
ST(CPU_96)
TU_MUTE(CPU_95)
PLL_DT_IN(CPU_94)
PLL_CLK(CPU_93)
PLL_DATA(CPU_92)
PLL_CE(CPU_98)
FROM TUNER UNIT
SRAM_CE
49326_A8001
ROM_3
ROM_30
ROM_2
ROM_CE
49326_RST
49326_INTREQ
49326_CE
89055/4527/49326_SDIN
89055/4527/49326_SCLK
89055_CE
4527_CE
89055/4527/49326_SDIO
4527_RST
DSP_GND
DSP_+5V
TO DSP UNIT
CP801
74HC151_A0
74HC151_A1
89055_RST
89055_EMPHA
89055_CS
89055_AUTO
ERR_MUTE
SEL_CLK
TO DSP UNIT
CP803
IC261A NJM2068(1/2)
IC261B NJM2068(2/2)
IC251A NJM2068(1/2)
IC251B NJM2068(2/2)
IC241A NJM2068(1/2)
IC241B NJM2068(2/2)
Q251 2SK117Y
Q252 2SK117Y
Q231 DTA114ES
Q232 DTC144ES
D251 1SS133T
D252 1SS133T
IC221 TC9164
IC201
CXP740096(AVR-1602)
CXP740056(AVC-1550)
X201 CST12M
D261 1N4007
D201 KDS160
D205 KDS160
BD201 BEAD
BD202 BEAD
IC202 TDA7730B0
CP552
TO CONNECTION UNIT
-VKK
PROTECT
PWR_DOWN
DSP_GND
DSP_+5V
CPU_+5.6V
SURR_MUTE
FRONT_MUTE
CNT_MUTE
RLY_POWER
H/P_MUTE
RLY_CNT
RLY_SURR
RLY_FRONT_A
RLY_FRONT_B
+B(SW_MUTE)
CP3010
TO FRONT UNIT
KEY_IN1(CPU_62)
KEY_IN2(CPU_61)
KEY_IN3(CPU_60)
VOL_UP
VOL_DOWN
2080_DATA
FL_DRV/2080_CLK
FL_DRV_RST
FL_DRV_CE
REMOCON(CPU_85)
CPU_GND
CPU_+5.6V
-VKK
CP601
TO VIDEO
SK/10K_S/W
VIDEO_MUTE
SEL1
SEL2
+15V
V_GND
V.AUX_VIDEO
SW_GND
SW_OUT

WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

NOTICE
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,00
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO
CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHO
NOTICE.


6
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A
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C
D
E
F
G
CPU BOARD
IC231
M62446
IC221
TC9164
IC271A NJM2068(1/2)
IC271B NJM2068(2/2)
IC281A NJM2068(1/2)
IC281B NJM2068(2/2)
IC291A NJM2068(1/2)
IC291B NJM2068(2/2)
IC202
TDA7330BD
FL
FR
SL
SR
C
SW
TONE
MCU I/F
OUT PORT
CP551
TO CONNECTION UNIT
FL
GND
FR
GND
SL
GND
SR
GND
C
GND
SW
GND
+15V
-15V
CP601
TO VIDEO UNIT
CP201
FROM INPUT CNT UNIT
BACK_UP_POWER
RESET
AREA/MODEL OPTION
B
D

ES IN OHM. k=1,000 OHM M=1,000,000 OHM
JES IN MICRO FARAD. P=MICRO-MICRO FARAD
JRRENT ARE MEASUERD AT MO SIGNAL INPUT

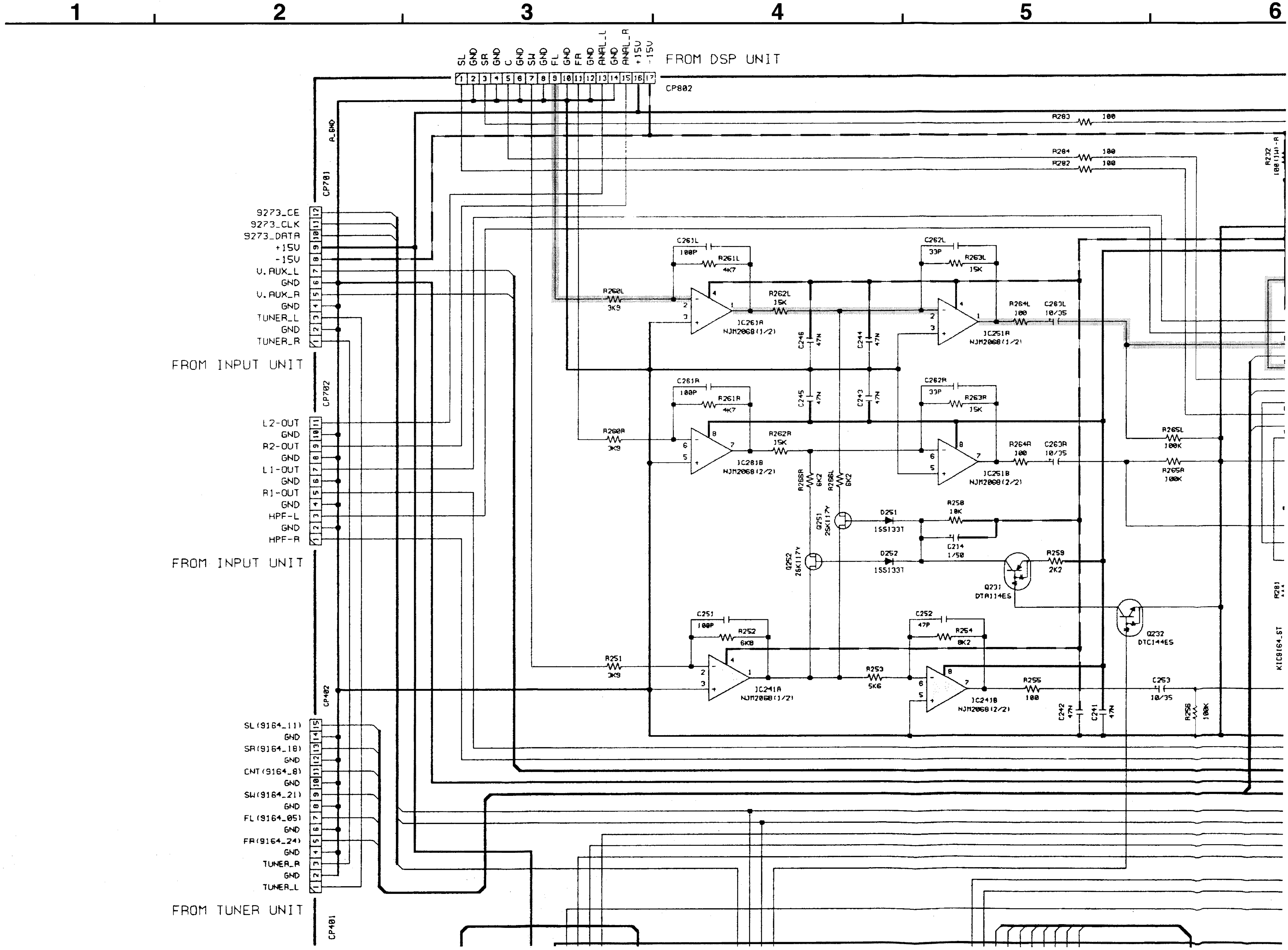
RE SUBJECT TO CHANGE WITHOUT PRIOR

——— +B LINE
— — — -B LINE
▨ SIGNAL LINE

H

SCHEMATIC DIAGRAMS(3/7)
CPU P.W.B. UNIT

SCHEMATIC DIAGRAMS(3/7)


1
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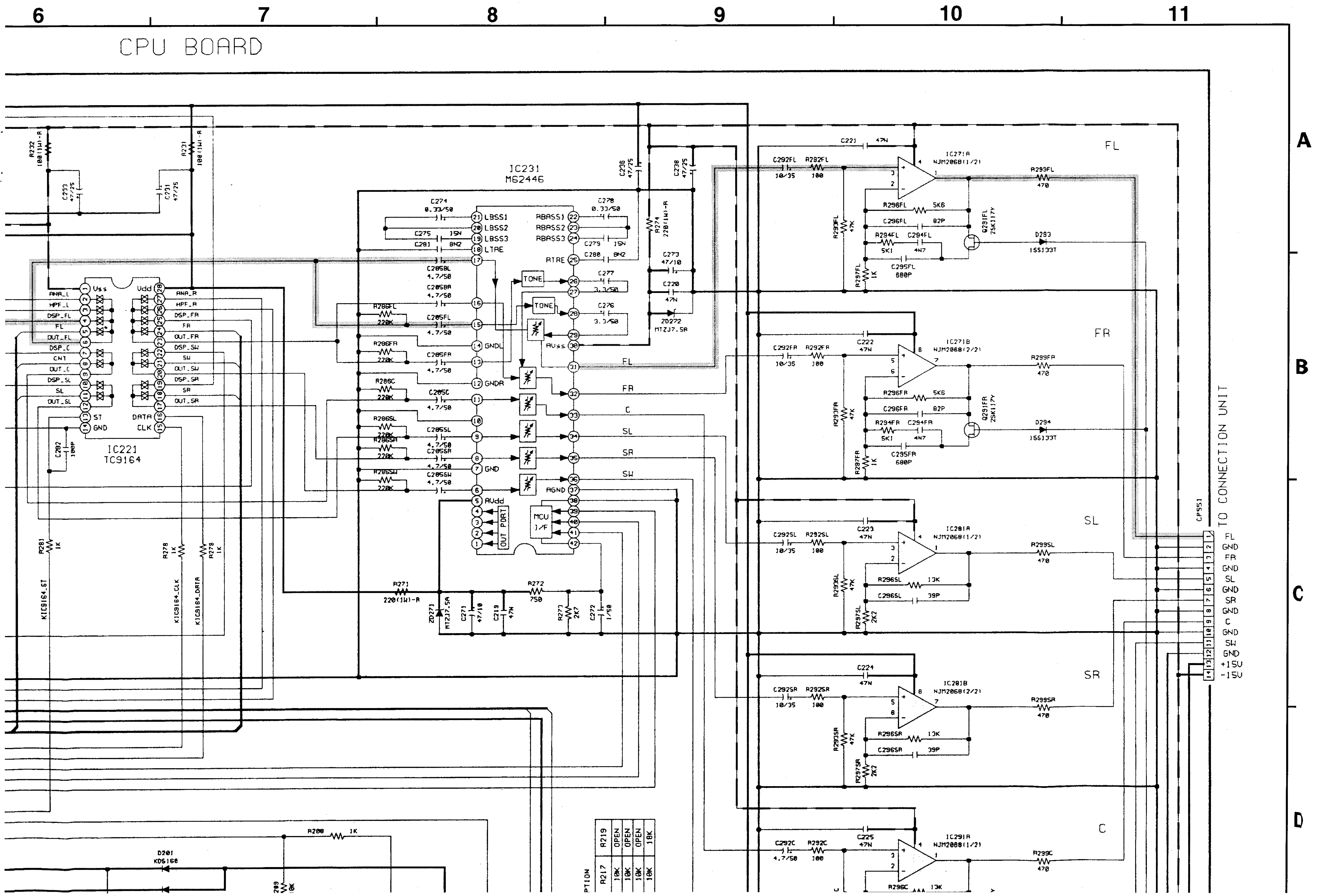
4
5
6
SL
GND
SR
GND
C
GND
SW
GND
FL
GND
FR
GND
ANAL_L
GND
ANAL_R
+15V
-15V
FROM DSP UNIT
CP802
A_GND
CP701
9273_CE
9273_CLK
9273_DATA
+15V
-15V
V.AUX_L
GND
V.AUX_R
GND
TUNER_L
GND
TUNER_R
FROM INPUT UNIT
CP702
L2-OUT
GND
R2-OUT
GND
L1-OUT
GND
R1-OUT
GND
HPF-L
GND
HPF-R
FROM INPUT UNIT
CP402
SL(9164_11)
GND
SR(9164_18)
GND
CNT(9164_8)
GND
SW(9164_21)
GND
FL(9164_05)
GND
FR(9164_24)
GND
TUNER_R
GND
TUNER_L
FROM TUNER UNIT
CP401
R283 100
R284 100
R282 100
R232 100(1W)-R
C261L 100P
R261L 4K7
R260L 3K9
R262L 15K
IC261A NJM2068(1/2)
C246 47N
C244 47N
C262L 33P
R263L 15K
IC251A NJM2068(1/2)
R264L 100
C263L 10/35
C261R 100P
R261R 4K7
R260R 3K9
R262R 15K
IC261B NJM2068(2/2)
C245 47N
C243 47N
C262R 33P
R263R 15K
IC251B NJM2068(2/2)
R264R 100
C263R 10/35
R265L 100K
R265R 100K
R266R 6K2
R266L 6K2
Q251 2SK117Y
D251 1SS133T
R258 10K
C214 1/50
Q252 2SK117Y
D252 1SS133T
Q231 DTA114ES
R259 2K2
Q232 DTC144ES
R281
KIC9164_ST
C251 100P
R252 6K8
R251 3K9
IC241A NJM2068(1/2)
R253 5K6
C252 47P
R254 8K2
IC241B NJM2068(2/2)
R255 100
C242 47N
C241 47N
C253 10/35
R256 100K


6
7
8
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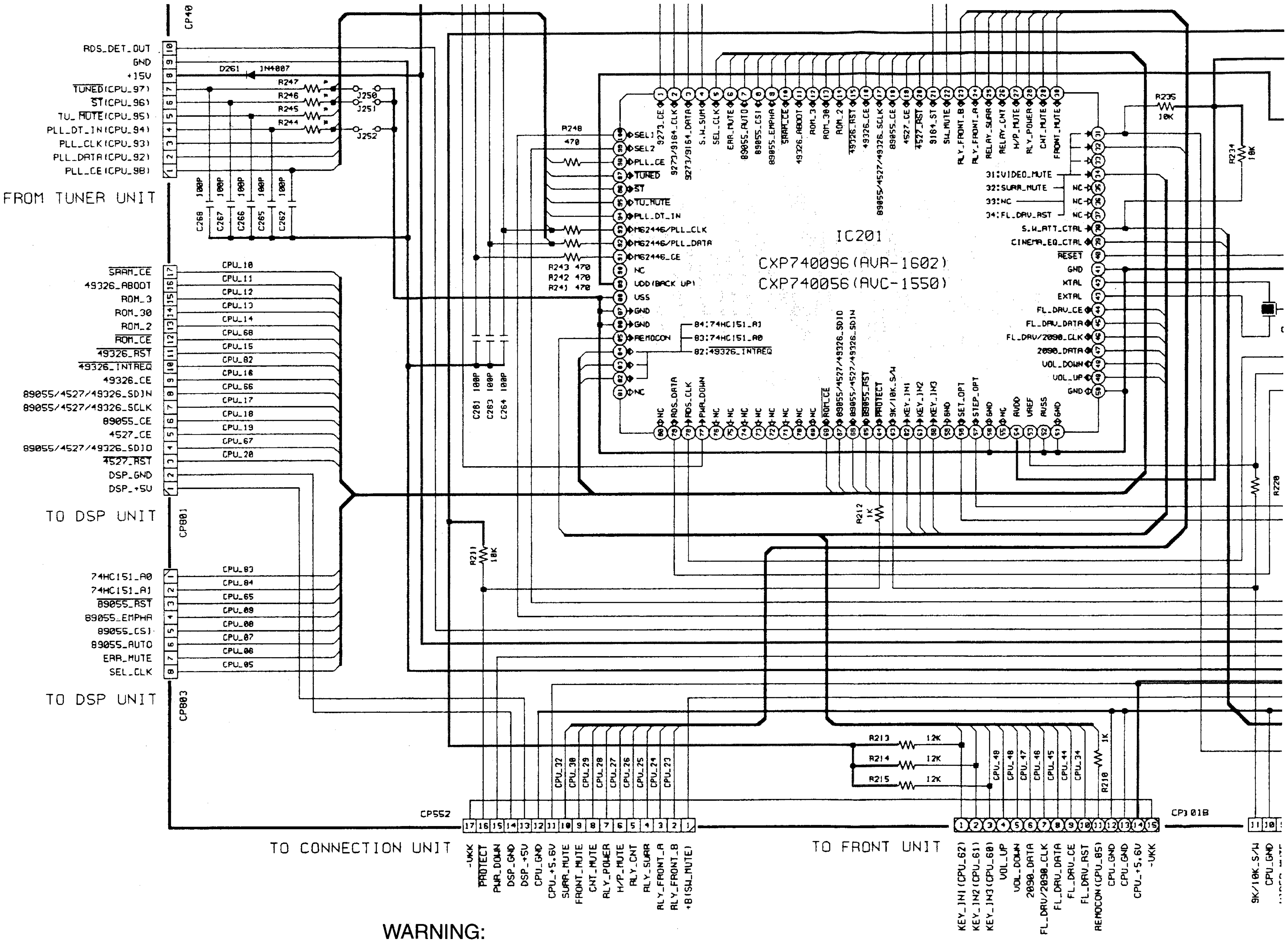
10
11
A
B
C
D
CPU BOARD
IC231
M62446
IC221
TC9164
IC271A
NJM2068(1/2)
IC271B
NJM2068(2/2)
IC281A
NJM2068(1/2)
IC281B
NJM2068(2/2)
IC291A
NJM2068(1/2)
FL
FR
SL
SR
C
SW
TONE
MCU I/F
OUT PORT
LBSS1
LBSS2
LBSS3
LTRE
RBASS1
RBASS2
RBASS3
RTRE
GNDL
GNDR
GND
AGND
AVss
AVdd
Vss
Vdd
ANA_L
HPF_L
DSP_FL
OUT_FL
DSP_C
CNT
OUT_C
DSP_SL
OUT_SL
ST
ANA_R
HPF_R
DSP_FR
OUT_FR
DSP_SW
OUT_SW
DSP_SR
OUT_SR
DATA
CLK
KIC9164_ST
KIC9164_CLK
KIC9164_DATA
Q291FL 2SK117Y
Q291FR 2SK117Y
D293 1SS133T
D294 1SS133T
ZD271 MTZJ7.5A
ZD272 MTZJ7.5A
R271 220(1W)-R
R272 750
R231 100(1W)-R
R232 100(1W)-R
R274 220(1W)-R
D201 KDS160
R208 1K
CP551
TO CONNECTION UNIT
FL
GND
FR
GND
SL
GND
SR
GND
C
GND
SW
GND
+15V
-15V
R219
OPEN
OPEN
OPEN
10K
R217
10K
10K
10K
10K
PTION


CP40
RDS_DET_OUT
GND
+15V
TUNED(CPU_97)
ST(CPU_96)
TU_MUTE(CPU_95)
PLL_DT_IN(CPU_94)
PLL_CLK(CPU_93)
PLL_DATA(CPU_92)
PLL_CE(CPU_98)
FROM TUNER UNIT
D261 1N4007
R247
R246
R245
R244
J250
J251
J252
C268 C267 C266 C265 C262
100P
SRAM_CE
49326_ABOOT
ROM_3
ROM_30
ROM_2
ROM_CE
49326_RST
49326_INTREQ
49326_CE
89055/4527/49326_SDIN
89055/4527/49326_SCLK
89055_CE
4527_CE
89055/4527/49326_SDIO
4527_RST
DSP_GND
DSP_+5V
TO DSP UNIT
CP801
74HC151_A0
74HC151_A1
89055_RST
89055_EMPHA
89055_CS1
89055_AUTO
EAR_MUTE
SEL_CLK
TO DSP UNIT
CP803
R248 470
R243 470
R242 470
R241 470
R211 10K
C281 C283 C264 100P
IC201
CXP740096(AVR-1602)
CXP740056(AVC-1550)
84:74HC151_A1
83:74HC151_A0
82:49326_INTREQ
31:VIDEO_MUTE
32:SURR_MUTE
33:NC
34:FL_DRV_RST
S.W_ATT_CTRL
CINEMA_EQ_CTRL
RESET
GND
XTAL
EXTAL
FL_DRV_CE
FL_DRV_DATA
FL_DRV/2090_CLK
2090_DATA
VOL_DOWN
VOL_UP
GND
R235 10K
R234 10K
R220
R212 1K
R213 12K
R214 12K
R215 12K
R210 1K
CP552
TO CONNECTION UNIT
-VKK
PROTECT
PWR_DOWN
DSP_GND
DSP_+5V
CPU_GND
CPU_+5.6V
SURR_MUTE
FRONT_MUTE
CNT_MUTE
RLY_POWER
H/P_MUTE
RLY_CNT
RLY_SURR
RLY_FRONT_A
RLY_FRONT_B
+B(SW_MUTE)
TO FRONT UNIT
CP1018
KEY_IN1(CPU_62)
KEY_IN2(CPU_61)
KEY_IN3(CPU_60)
VOL_UP
VOL_DOWN
2090_DATA
FL_DRV/2090_CLK
FL_DRV_DATA
FL_DRV_CE
FL_DRV_RST
REMOCON(CPU_85)
CPU_GND
CPU_GND
CPU_+5.6V
-VKK
9K/10K_S/W
CPU_GND

WARNING:

Parts marked with this symbol ⚠ ▢ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

CAUTION:

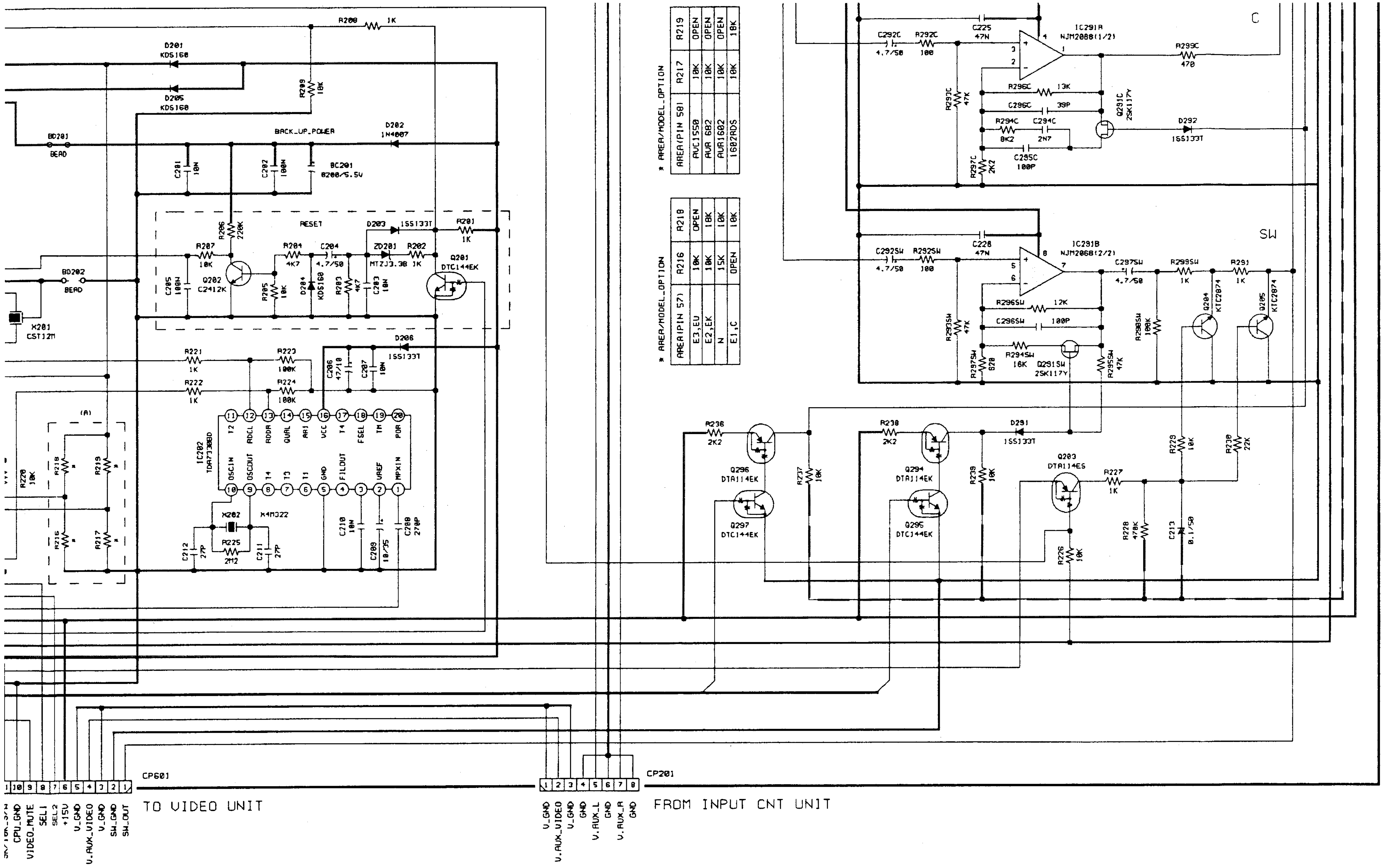
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

NOTICE

ALL RESISTANCE VALUES IN
ALL CAPACITANCE VALUES I
EACH VOLTAGE AND CURRE
CONDITION.
CIRCUIT AND PARTS ARE SU
NOTICE.


R208 1K
D201 KDS160
D205 KDS160
R209 10K
BACK_UP_POWER
D202 1N4007
BD201 BEAD
C201 10N
C202 100N
BC201 0200/5.5V
RESET
R206 220K
R207 10K
R204 4K7
C204 4.7/50
D203 1SS133T
ZD201 MTZJ3.3B
R202 1K
R201 1K
Q201 DTC144EK
BD202 BEAD
C205 100N
Q202 C2412K
R205 10K
D204 KDS160
R203 4K7
C203 10N
X201 CST12M
R221 1K
R223 100K
R222 1K
R224 100K
C206 47/10
C207 10N
D206 1SS133T
IC202 TDA7330BD
OSCIN
OSCOUT
T4
T3
T1
GND
FILOUT
VREF
MPXIN
T2
RDCL
RDDA
QUAL
ARI
VCC
FSEL
TM
POR
X202 K4M322
R225 2M2
C212 27P
C211 27P
C210 10N
C209 10/35
C208 270P
(A)
R220 10K
R218
R219
R216
R217
CP601
TO VIDEO UNIT
CPU_GND
VIDEO_MUTE
SEL1
SEL2
+15V
V_GND
V.AUX_VIDEO
V_GND
SW_GND
SW_OUT
C225 47N
IC291A NJM2068(1/2)
C292C 4.7/50
R292C 100
R293C 47K
R296C 13K
C296C 39P
R294C 8K2
C294C 2N7
C295C 100P
R297C 2K2
Q291C 2SK117Y
R299C 470
D292 1SS133T
C
C228 47N
IC291B NJM2068(2/2)
C292SW 4.7/50
R292SW 100
C297SW 4.7/50
R299SW 1K
R291 1K
SW
R293SW 47K
R296SW 12K
C296SW 100P
R294SW 16K
Q291SW 2SK117Y
R297SW 820
R295SW 47K
R298SW 10K
Q204 KTC2874
Q205 KTC2874
R236 2K2
Q296 DTA114EK
Q297 DTC144EK
R237 10K
R238 2K2
Q294 DTA114EK
Q295 DTC144EK
R239 10K
D291 1SS133T
Q203 DTA114ES
R227 1K
R229 10K
R230 22K
R228 470K
C213 0.1/50
R226 10K
CP201
FROM INPUT CNT UNIT
V_GND
V.AUX_VIDEO
V_GND
GND
V.AUX_L
GND
V.AUX_R
GND
D
E
F
G
H

* AREA/MODEL_OPTION

AREA(PIN 58)	R217	R219
AVC1550	10K	OPEN
AVR 682	10K	OPEN
AVR1602	10K	OPEN
1602RDS	10K	10K

* AREA/MODEL_OPTION

AREA(PIN 57)	R216	R218
E3,EU	10K	OPEN
E2,EK	10K	10K
N	15K	10K
E1,C	OPEN	10K

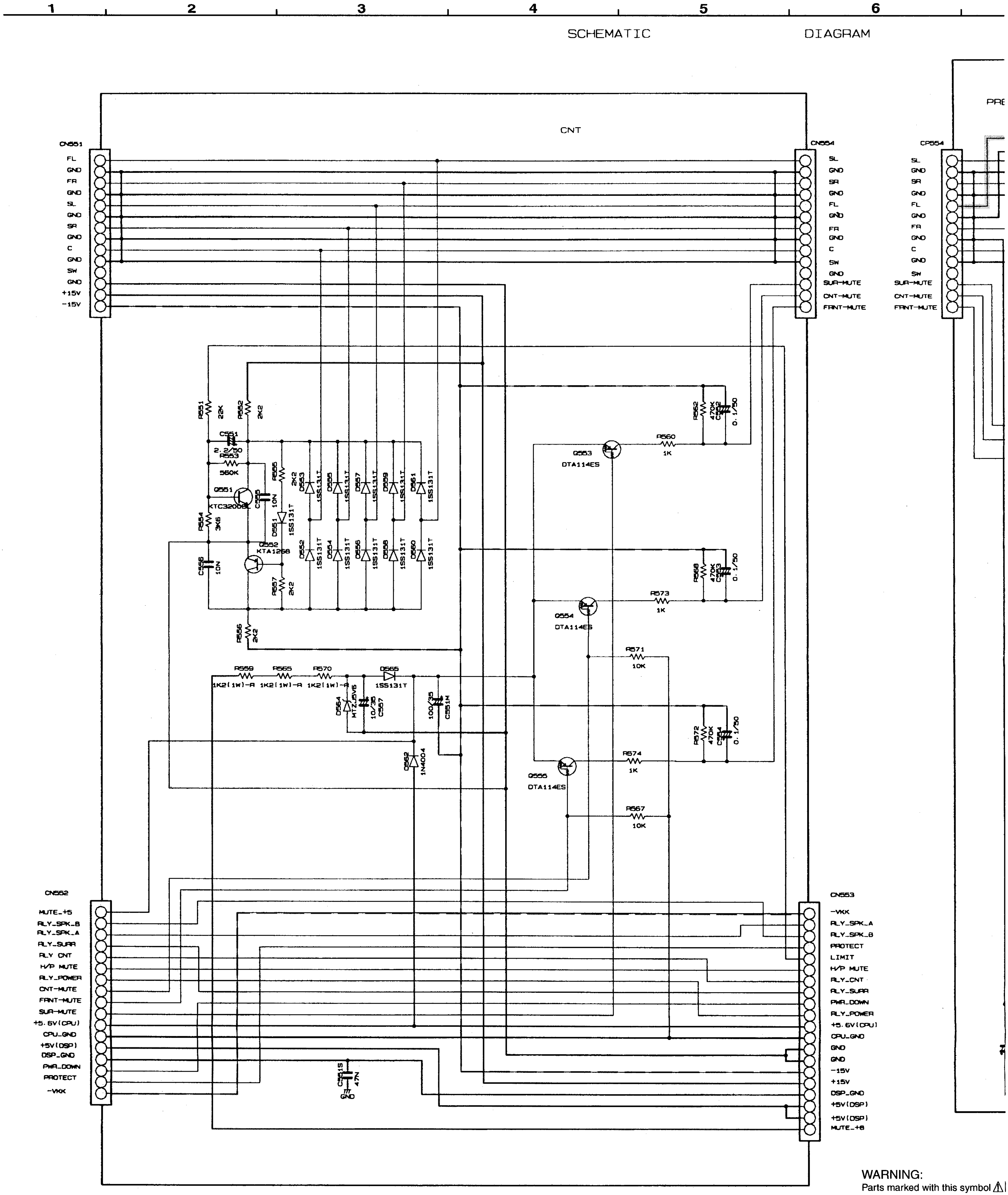
; IN OHM. k=1,000 OHM M=1,000,000 OHM
:S IN MICRO FARAD. P=MICRO-MICRO FARAD
RENT ARE MEASUERD AT MO SIGNAL INPUT

SUBJECT TO CHANGE WITHOUT PRIOR

—— +B LINE
— — — - B LINE
▨ SIGNAL LINE

SCHEMATIC DIAGRAMS(3/7)
CPU P.W.B. UNIT

SCHEMATIC DIAGRAMS(4/7)



1
2
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5
6
SCHEMATIC DIAGRAM
CNT
PRE
CN551
FL
GND
FR
GND
SL
GND
SR
GND
C
GND
SW
GND
+15V
-15V
CN554
SL
GND
SR
GND
FL
GND
FR
GND
C
SW
GND
SUR-MUTE
CNT-MUTE
FRNT-MUTE
CP554
SL
GND
SR
GND
FL
GND
FR
GND
C
GND
SW
SUR-MUTE
CNT-MUTE
FRNT-MUTE
R551 22K
R552 2K2
C551 2.2/50
R553 560K
Q551 KTC3200BL
C553 10N
R555 2K2
D551 1SS131T
R554 3K6
Q552 KTA1268
C556 10N
R557 2K2
R556 2K2
D553 1SS131T
D555 1SS131T
D557 1SS131T
D559 1SS131T
D561 1SS131T
D552 1SS131T
D554 1SS131T
D556 1SS131T
D558 1SS131T
D560 1SS131T
R562 470K
C552 0.1/50
R560 1K
Q553 DTA114ES
R568 470K
C553 0.1/50
R573 1K
Q554 DTA114ES
R571 10K
R559 1K2(1W)-R
R565 1K2(1W)-R
R570 1K2(1W)-R
D565 1SS131T
D564 MTZJ5V6
C557 10/35
C551M 100/35
D562 1N4004
R572 470K
C554 0.1/50
R574 1K
Q555 DTA114ES
R567 10K
CN552
MUTE_+5
RLY_SPK_B
RLY_SPK_A
RLY_SURR
RLY CNT
H/P MUTE
RLY_POWER
CNT-MUTE
FRNT-MUTE
SUR-MUTE
+5.6V(CPU)
CPU_GND
+5V(DSP)
DSP_GND
PWR_DOWN
PROTECT
-VKK
C551S 47N
GND
CN553
-VKK
RLY_SPK_A
RLY_SPK_B
PROTECT
LIMIT
H/P MUTE
RLY_CNT
RLY_SURR
PWR_DOWN
RLY_POWER
+5.6V(CPU)
CPU_GND
GND
GND
-15V
+15V
DSP_GND
+5V(DSP)
+5V(DSP)
MUTE_+8

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

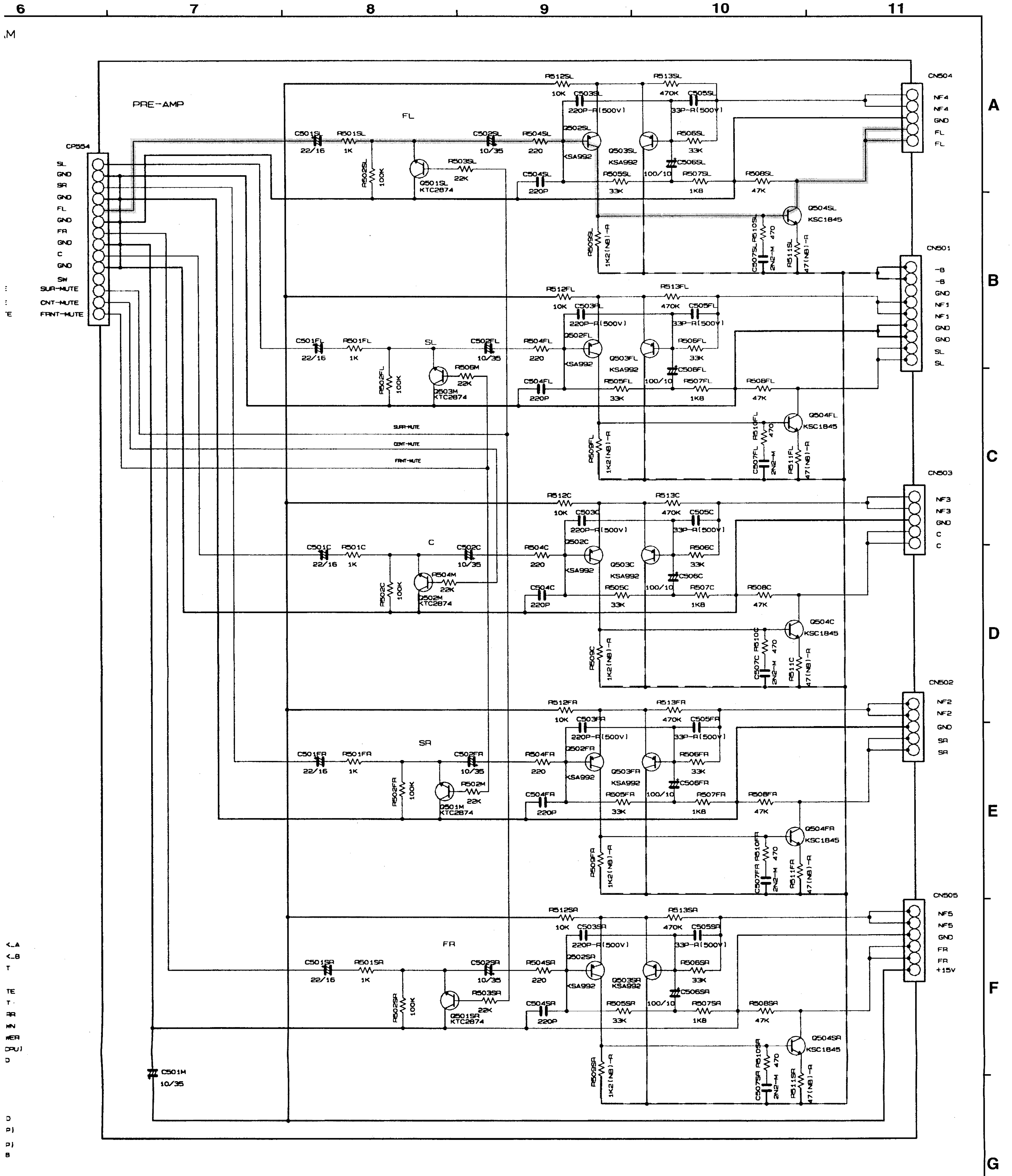
Parts marked with this symbol ⚠
Use ONLY replacement parts rec

CAUTION:

Before returning the unit to the cu
leakage current check or (2) a lin
current exceeds 0.5 milliamps, or
of the power card is less than 460

WARNING:

DO NOT return the unit to the cus
corrected.


6
7
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9
10
11
A
B
C
D
E
F
G
PRE-AMP
CP554
SL
GND
SR
GND
FL
GND
FR
GND
C
GND
SW
SUR-MUTE
CNT-MUTE
FRNT-MUTE
FL
SL
C
SR
FR
C501SL 22/16
R501SL 1K
R502SL 100K
Q501SL KTC2874
R503SL 22K
C502SL 10/35
R504SL 220
R512SL 10K
C503SL 220P-R(500V)
Q502SL KSA992
Q503SL KSA992
R513SL 470K
C505SL 33P-R(500V)
R506SL 33K
C506SL 100/10
C504SL 220P
R505SL 33K
R507SL 1K8
R508SL 47K
Q504SL KSC1845
R509SL 1K2(NB)-R
R510SL 470
C507SL 2N2-M
R511SL 47(NB)-R
CN504
NF4
NF4
GND
FL
FL
CN501
-B
-B
GND
NF1
NF1
GND
GND
SL
SL
C501FL 22/16
R501FL 1K
R502FL 100K
Q503M KTC2874
R506M 22K
C502FL 10/35
R504FL 220
R512FL 10K
C503FL 220P-R(500V)
Q502FL KSA992
Q503FL KSA992
R513FL 470K
C505FL 33P-R(500V)
R506FL 33K
C506FL 100/10
C504FL 220P
R505FL 33K
R507FL 1K8
R508FL 47K
Q504FL KSC1845
R509FL 1K2(NB)-R
R510FL 470
C507FL 2N2-M
R511FL 47(NB)-R
SURR-MUTE
CENT-MUTE
FRNT-MUTE
CN503
NF3
NF3
GND
C
C
C501C 22/16
R501C 1K
R502C 100K
Q502M KTC2874
R504M 22K
C502C 10/35
R504C 220
R512C 10K
C503C 220P-R(500V)
Q502C KSA992
Q503C KSA992
R513C 470K
C505C 33P-R(500V)
R506C 33K
C506C 100/10
C504C 220P
R505C 33K
R507C 1K8
R508C 47K
Q504C KSC1845
R509C 1K2(NB)-R
R510C 470
C507C 2N2-M
R511C 47(NB)-R
CN502
NF2
NF2
GND
SR
SR
C501FR 22/16
R501FR 1K
R502FR 100K
Q501M KTC2874
R502M 22K
C502FR 10/35
R504FR 220
R512FR 10K
C503FR 220P-R(500V)
Q502FR KSA992
Q503FR KSA992
R513FR 470K
C505FR 33P-R(500V)
R506FR 33K
C506FR 100/10
C504FR 220P
R505FR 33K
R507FR 1K8
R508FR 47K
Q504FR KSC1845
R509FR 1K2(NB)-R
R510FR 470
C507FR 2N2-M
R511FR 47(NB)-R
CN505
NF5
NF5
GND
FR
FR
+15V
C501SR 22/16
R501SR 1K
R502SR 100K
Q501SR KTC2874
R503SR 22K
C502SR 10/35
R504SR 220
R512SR 10K
C503SR 220P-R(500V)
Q502SR KSA992
Q503SR KSA992
R513SR 470K
C505SR 33P-R(500V)
R506SR 33K
C506SR 100/10
C504SR 220P
R505SR 33K
R507SR 1K8
R508SR 47K
Q504SR KSC1845
R509SR 1K2(NB)-R
R510SR 470
C507SR 2N2-M
R511SR 47(NB)-R
C501M 10/35

H

WARNING:
Parts marked with this symbol ⚠ ▢ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

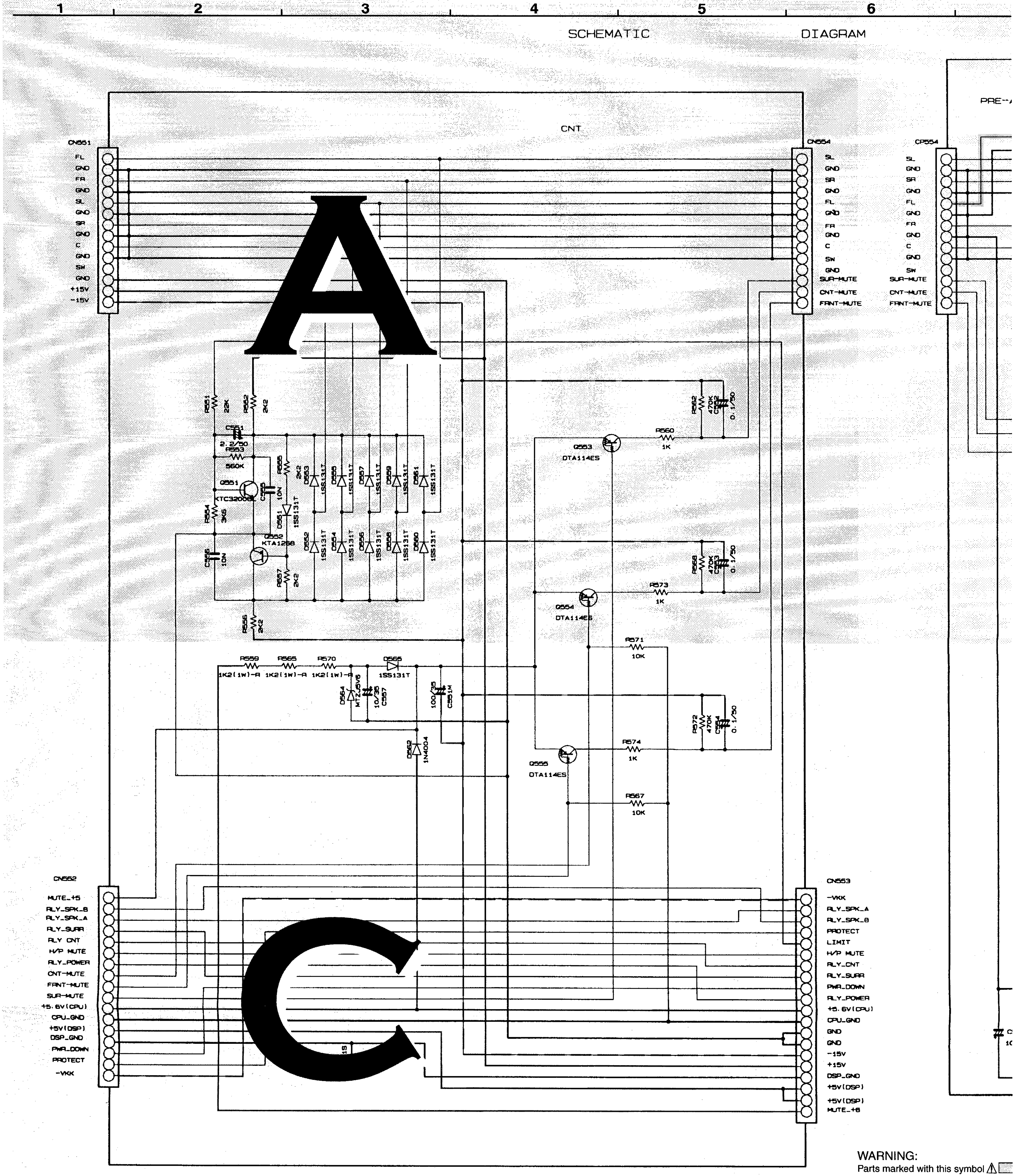
WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

———— +B LINE
— — — — B LINE
▨ SIGNAL LINE

SCHEMATIC DIAGRAMS(4/7)

CNT P.W.B. UNIT
PRE-AMP P.W.B. UNIT

SCHEMATIC DIAGRAMS(4/7)


1
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6
SCHEMATIC DIAGRAM
CNT
PRE--
A
C
CN551
FL
GND
FR
GND
SL
GND
SR
GND
C
GND
SW
GND
+15V
-15V
CN554
SL
GND
SR
GND
FL
GND
FR
GND
C
SW
GND
SUR-MUTE
CNT-MUTE
FRNT-MUTE
CP554
SL
GND
SR
GND
FL
GND
FR
GND
C
GND
SW
SUR-MUTE
CNT-MUTE
FRNT-MUTE
R551
22K
R552
2K2
C551
2.2/50
R553
560K
Q551
KTC3200BL
C555
10N
R555
2K2
D551
1SS131T
R554
3K5
Q552
KTA1268
C556
10N
R557
2K2
R556
2K2
D552
D553
D554
D555
D556
D557
D558
D559
D560
D561
1SS131T
R562
470K
C552
0.1/50
R560
1K
Q553
DTA114ES
R568
470K
C553
0.1/50
R573
1K
Q554
DTA114ES
R571
10K
R559
1K2(1W)-A
R565
1K2(1W)-A
R570
1K2(1W)-A
D565
1SS131T
D564
MTZJ5V6
10/35
C557
100/35
C551M
R572
470K
C554
0.1/50
D562
1N4004
R574
1K
Q555
DTA114ES
R567
10K
CN552
MUTE_+5
RLY_SPK_B
RLY_SPK_A
RLY_SURR
RLY CNT
H/P MUTE
RLY_POWER
CNT-MUTE
FRNT-MUTE
SUR-MUTE
+5.6V(CPU)
CPU_GND
+5V(DSP)
DSP_GND
PWR_DOWN
PROTECT
-VKK
CN553
-VKK
RLY_SPK_A
RLY_SPK_B
PROTECT
LIMIT
H/P MUTE
RLY_CNT
RLY_SURR
PWR_DOWN
RLY_POWER
+5.6V(CPU)
CPU_GND
GND
GND
-15V
+15V
DSP_GND
+5V(DSP)
+5V(DSP)
MUTE_+8

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

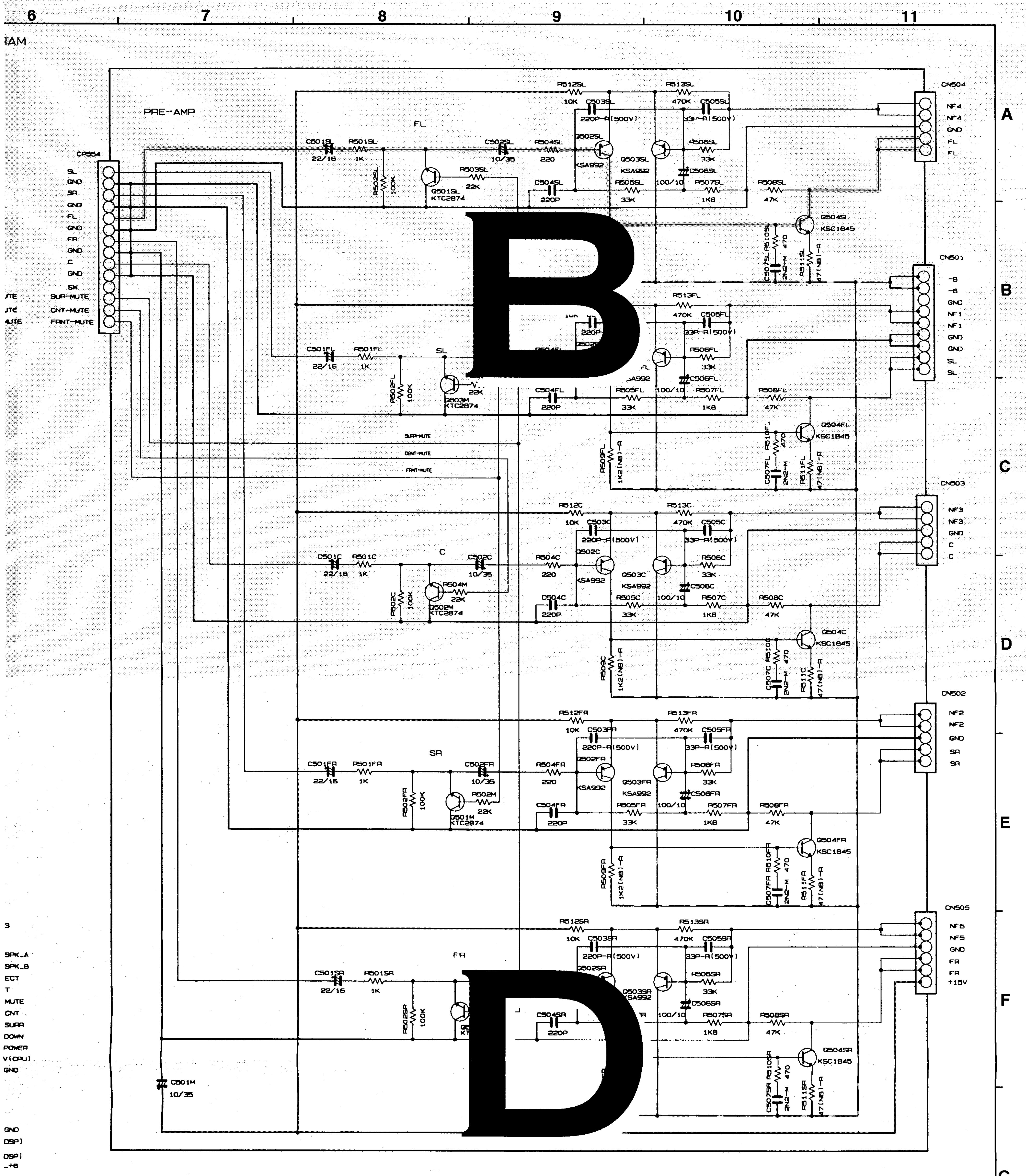
Parts marked with this symbol ⚠ ▨
Use ONLY replacement parts recom

CAUTION:

Before returning the unit to the custo
leakage current check or (2) a line to
current exceeds 0.5 milliamps, or if th
of the power card is less than 460ko

WARNING:

DO NOT return the *unit to the custon*
corrected.


6
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10
11
A
B
C
D
E
F
G
ıAM
PRE-AMP
CP554
SL
GND
SR
GND
FL
GND
FR
GND
C
GND
SW
SUR-MUTE
CNT-MUTE
FRNT-MUTE
FL
SL
C
SR
FR
SURR-MUTE
CENT-MUTE
FRNT-MUTE
C501SL 22/16
R501SL 1K
R502SL 100K
Q501SL KTC2874
R503SL 22K
C502SL 10/35
R504SL 220
C504SL 220P
R512SL 10K
C503SL 220P-R(500V)
Q502SL KSA992
Q503SL KSA992
R505SL 33K
R513SL 470K
C505SL 33P-R(500V)
R506SL 33K
C506SL 100/10
R507SL 1K8
R508SL 47K
Q504SL KSC1845
R510SL 470
C507SL 2N2-M
R511SL 47(NB)-R
Q504FL KSC1845
R509FL 1K2(NB)-R
Q503M KTC2874
Q502M KTC2874
Q501M KTC2874
R504M 22K
R502M 22K
C501M 10/35
Q504C KSC1845
Q504FR KSC1845
Q504SR KSC1845
CN504
NF4
NF4
GND
FL
FL
CN501
-B
-B
GND
NF1
NF1
GND
GND
SL
SL
CN503
NF3
NF3
GND
C
C
CN502
NF2
NF2
GND
SR
SR
CN505
NF5
NF5
GND
FR
FR
+15V
3
SPK_A
SPK_B
ECT
T
MUTE
CNT
SURR
DOWN
POWER
V(CPU)
GND
GND
DSP)
DSP)
_+B
B
D

WARNING:
Parts marked with this symbol ⚠ ▭ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

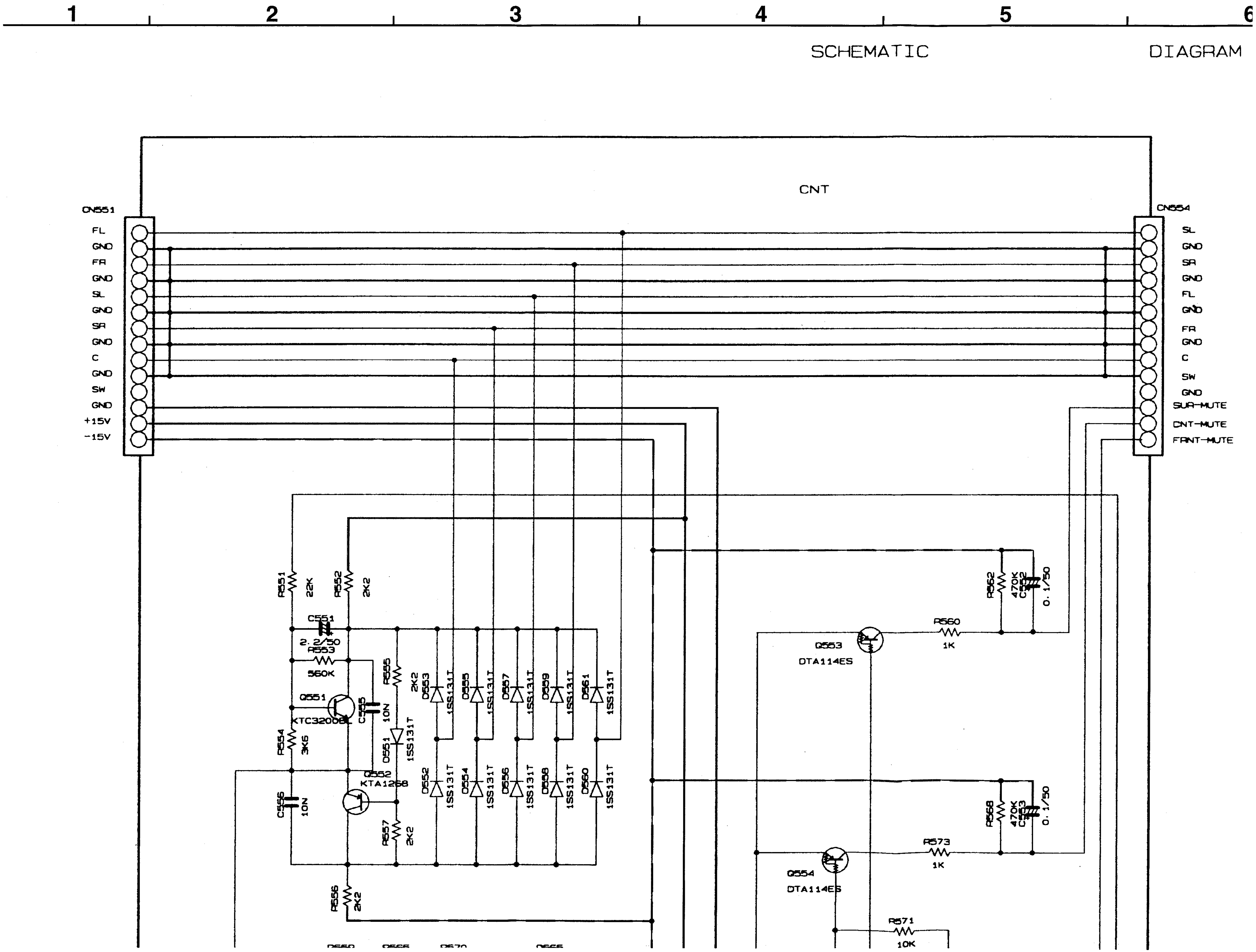
WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

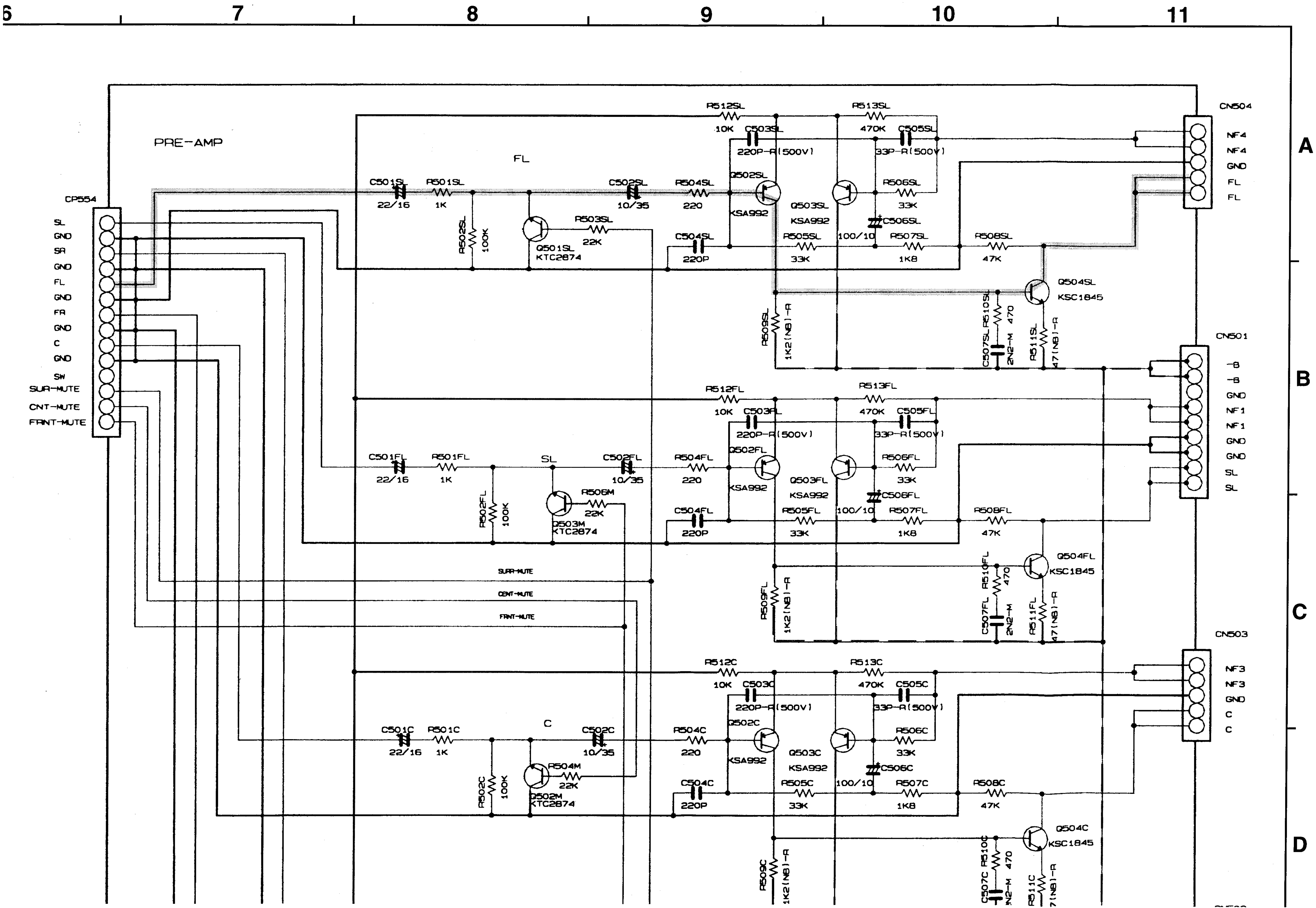
——— + B LINE
— — — - B LINE
▒▒▒ SIGNAL LINE

SCHEMATIC DIAGRAMS(4/7)
CNT P.W.B. UNIT
PRE-AMP P.W.B. UNIT

H

SCHEMATIC DIAGRAMS(4/7)


1
2
3
4
5
6
SCHEMATIC
DIAGRAM
CNT
CN551
FL
GND
FR
GND
SL
GND
SR
GND
C
GND
SW
GND
+15V
-15V
CN554
SL
GND
SR
GND
FL
GND
FR
GND
C
SW
GND
SUR-MUTE
CNT-MUTE
FRNT-MUTE
R551
22K
R552
2K2
C551
2.2/50
R553
560K
Q551
KTC3200BL
C555
10N
R555
2K2
D551
1SS131T
R554
3K6
Q552
KTA1268
C556
10N
R557
2K2
R556
2K2
D553
1SS131T
D555
1SS131T
D557
1SS131T
D559
1SS131T
D561
1SS131T
D552
1SS131T
D554
1SS131T
D556
1SS131T
D558
1SS131T
D560
1SS131T
R562
470K
C552
0.1/50
R560
1K
Q553
DTA114ES
R568
470K
C553
0.1/50
R573
1K
Q554
DTA114ES
R571
10K


6
7
8
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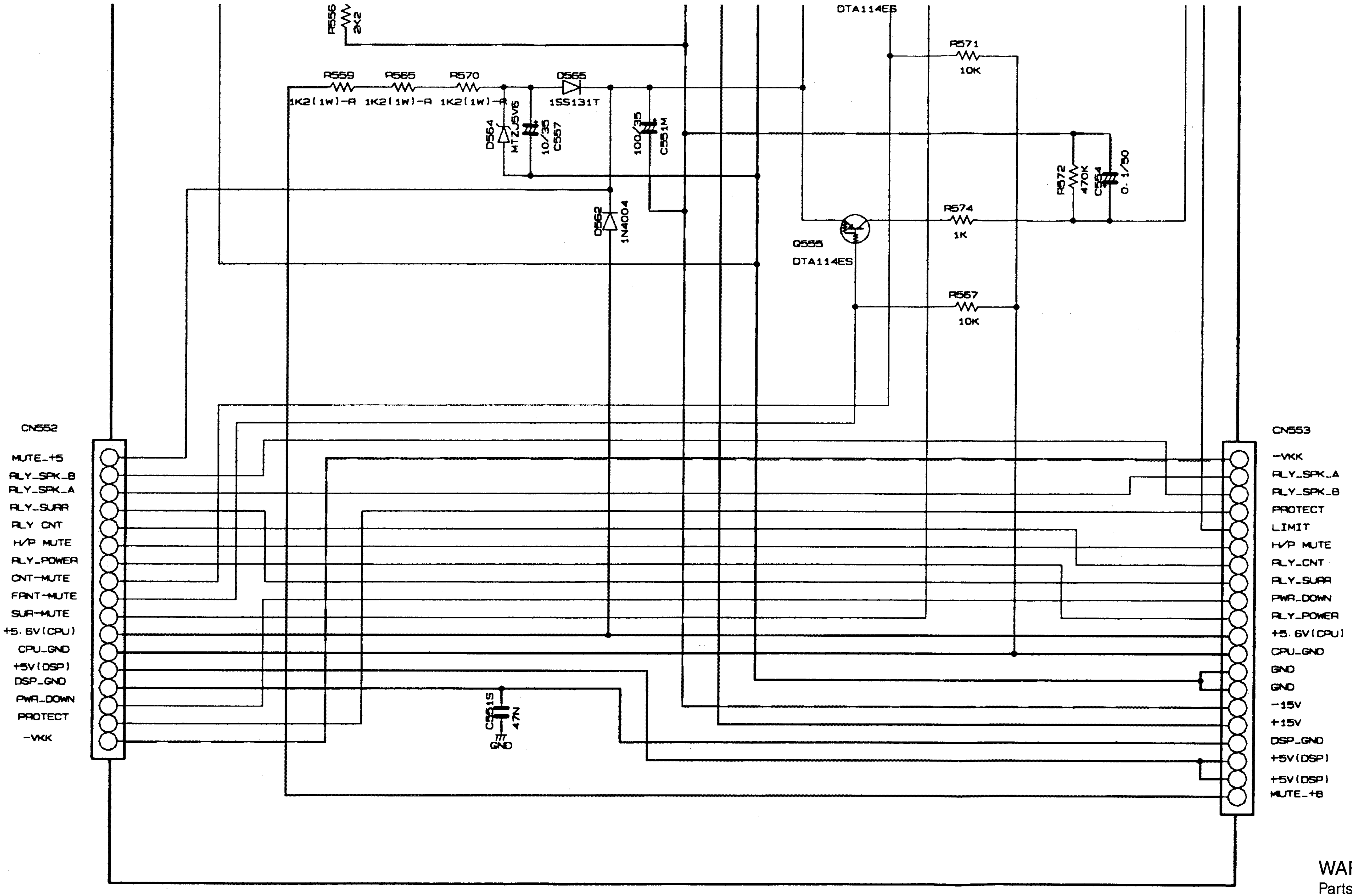
11
A
B
C
D
PRE-AMP
FL
SL
C
CP554
SL
GND
SR
GND
FL
GND
FR
GND
C
GND
SW
SUR-MUTE
CNT-MUTE
FRNT-MUTE
C501SL
22/16
R501SL
1K
R502SL
100K
Q501SL
KTC2874
R503SL
22K
C502SL
10/35
R504SL
220
C504SL
220P
R512SL
10K
C503SL
220P-R(500V)
Q502SL
KSA992
Q503SL
KSA992
R505SL
33K
R513SL
470K
C505SL
33P-R(500V)
R506SL
33K
C506SL
100/10
R507SL
1K8
R508SL
47K
Q504SL
KSC1845
R509SL
1K2(NB)-R
R510SL
470
C507SL
2N2-M
R511SL
47(NB)-R
CN504
NF4
NF4
GND
FL
FL
CN501
-B
-B
GND
NF1
NF1
GND
GND
SL
SL
C501FL
22/16
R501FL
1K
R502FL
100K
Q503M
KTC2874
R506M
22K
C502FL
10/35
R504FL
220
C504FL
220P
R512FL
10K
C503FL
220P-R(500V)
Q502FL
KSA992
Q503FL
KSA992
R505FL
33K
R513FL
470K
C505FL
33P-R(500V)
R506FL
33K
C506FL
100/10
R507FL
1K8
R508FL
47K
Q504FL
KSC1845
R509FL
1K2(NB)-R
R510FL
470
C507FL
2N2-M
R511FL
47(NB)-R
SURR-MUTE
CENT-MUTE
FRNT-MUTE
CN503
NF3
NF3
GND
C
C
C501C
22/16
R501C
1K
R502C
100K
Q502M
KTC2874
R504M
22K
C502C
10/35
R504C
220
C504C
220P
R512C
10K
C503C
220P-R(500V)
Q502C
KSA992
Q503C
KSA992
R505C
33K
R513C
470K
C505C
33P-R(500V)
R506C
33K
C506C
100/10
R507C
1K8
R508C
47K
Q504C
KSC1845
R509C
1K2(NB)-R
R510C
470
C507C
2N2-M
R511C
47(NB)-R


R556
2K2
DTA114ES
R571
10K
R559
R565
R570
D565
1K2(1W)-R
1K2(1W)-R
1K2(1W)-R
1SS131T
D564
MTZJ5V6
10/35
C557
100/35
C551M
R572
470K
C554
0.1/50
D562
1N4004
R574
1K
Q555
DTA114ES
R567
10K
CN552
MUTE_+5
RLY_SPK_B
RLY_SPK_A
RLY_SURR
RLY CNT
H/P MUTE
RLY_POWER
CNT-MUTE
FRNT-MUTE
SUR-MUTE
+5.6V(CPU)
CPU_GND
+5V(DSP)
DSP_GND
PWR_DOWN
PROTECT
-VKK
C551S
47N
GND
CN553
-VKK
RLY_SPK_A
RLY_SPK_B
PROTECT
LIMIT
H/P MUTE
RLY_CNT
RLY_SURR
PWR_DOWN
RLY_POWER
+5.6V(CPU)
CPU_GND
GND
GND
-15V
+15V
DSP_GND
+5V(DSP)
+5V(DSP)
MUTE_+8

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

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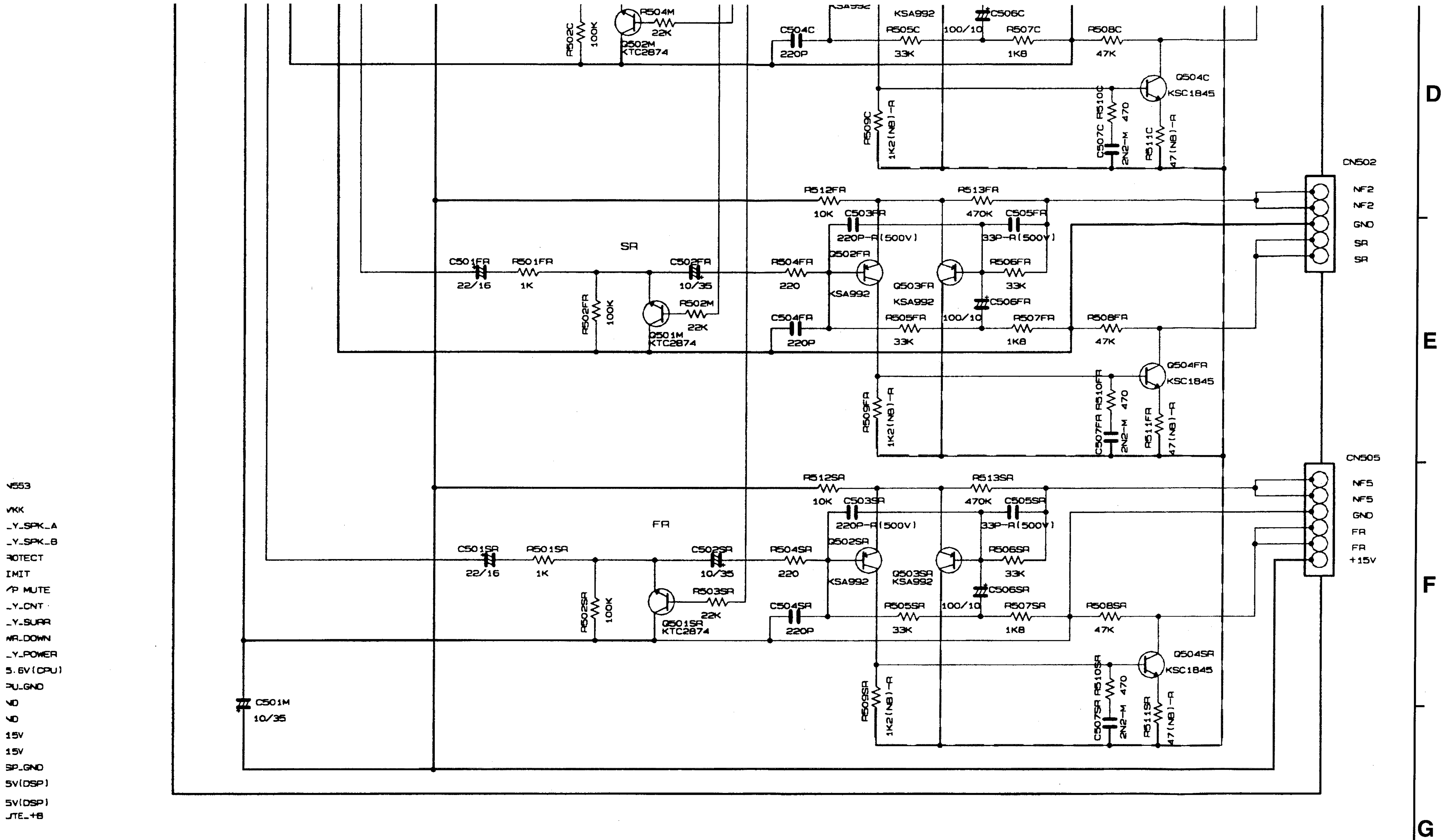
R504M
22K
R502C
100K
Q502M
KTC2874
KSA992
C506C
C504C
220P
R505C
33K
100/10
R507C
1K8
R508C
47K
Q504C
KSC1845
R509C
1K2(NB)-R
R510C
470
C507C
2N2-M
R511C
47(NB)-R
D
CN502
NF2
NF2
GND
SR
SR
R512FR
10K
C503FR
220P-R(500V)
R513FR
470K
C505FR
33P-R(500V)
SR
C501FR
22/16
R501FR
1K
C502FR
10/35
R502FR
100K
R502M
22K
Q501M
KTC2874
R504FR
220
Q502FR
KSA992
Q503FR
KSA992
R506FR
33K
C506FR
C504FR
220P
R505FR
33K
100/10
R507FR
1K8
R508FR
47K
Q504FR
KSC1845
R509FR
1K2(NB)-R
R510FR
470
C507FR
2N2-M
R511FR
47(NB)-R
E
CN505
NF5
NF5
GND
FR
FR
+15V
R512SR
10K
C503SR
220P-R(500V)
R513SR
470K
C505SR
33P-R(500V)
FR
C501SR
22/16
R501SR
1K
C502SR
10/35
R502SR
100K
R503SR
22K
Q501SR
KTC2874
R504SR
220
Q502SR
KSA992
Q503SR
KSA992
R506SR
33K
C506SR
C504SR
220P
R505SR
33K
100/10
R507SR
1K8
R508SR
47K
Q504SR
KSC1845
R509SR
1K2(NB)-R
R510SR
470
C507SR
2N2-M
R511SR
47(NB)-R
F
C501M
10/35
N553
VKK
_Y_SPK_A
_Y_SPK_B
ROTECT
IMIT
/P MUTE
_Y_CNT
_Y_SURR
WR_DOWN
_Y_POWER
5.6V(CPU)
PU_GND
ND
ND
15V
15V
SP_GND
5V(DSP)
5V(DSP)
UTE_+B
G
H

WARNING:
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CAUTION:
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WARNING:
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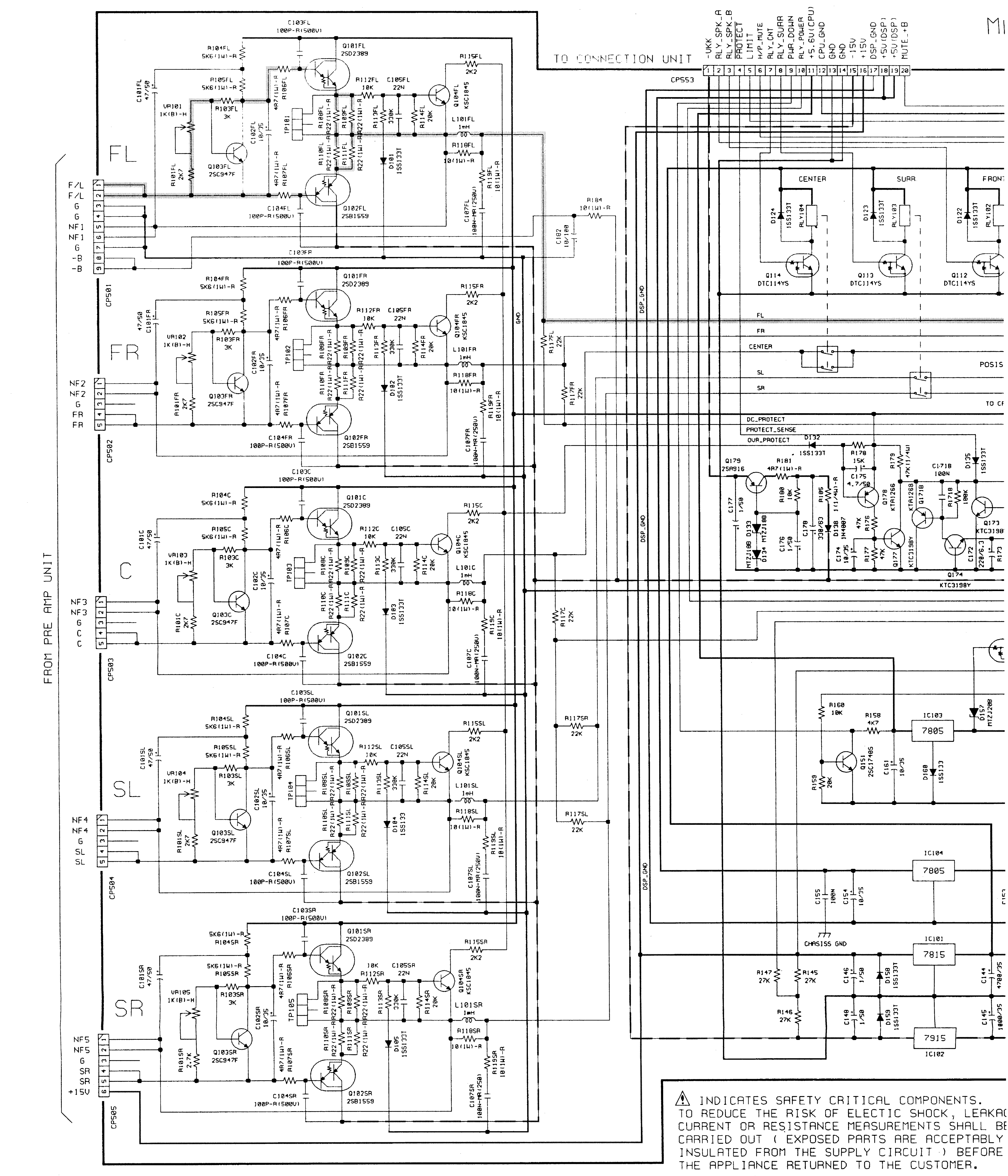
———— + B LINE
— — — - B LINE
▨ SIGNAL LINE

SCHEMATIC DIAGRAMS(4/7)
CNT P.W.B. UNIT
PRE-AMP P.W.B. UNIT

SCHEMATIC DIAGRAMS(5/7)


1
2
3
4
5
6
TO CONNECTION UNIT
CP553
-VKK
RLY_SPK_A
RLY_SPK_B
PROTECT
LIMIT
H/P_MUTE
RLY_CNT
RLY_SURR
PWR_DOWN
RLY_POWER
+5.6V(CPU)
CPU_GND
GND
GND
-15V
+15V
DSP_GND
+5V(DSP)
+5V(DSP)
MUTE_+B
FROM PRE AMP UNIT
FL
FR
C
SL
SR
F/L
F/L
G
G
NF1
NF1
G
-B
-B
CP501
NF2
FR
CP502
NF3
CP503
NF4
CP504
NF5
+15V
CP505
C103FL 100P-R(500V)
R104FL 5K6(1W)-R
R105FL 5K6(1W)-R
Q101FL 2SD2389
Q102FL 2SB1559
Q103FL 2SC947F
Q104FL KSC1845
VR101 1K(B)-H
R103FL 3K
R101FL 2K7
C101FL 47/50
C102FL 10/35
R112FL 10K
C105FL 22N
R115FL 2K2
R113FL 330K
R114FL 20K
L101FL 1mH
R118FL 10(1W)-R
R119FL 10(1W)-R
C107FL 100N-MR(250V)
C104FL 100P-R(500V)
D101 1SS133T
TP101
R184 10(1W)-R
C182 10/100
R117FL 22K
R117FR 22K
R117C 22K
R117SR 22K
R117SL 22K
GND
DSP_GND
CENTER
SURR
FRONT
D124 1SS133T
D123 1SS133T
D122 1SS133T
RLY104
RLY103
Q114 DTC114YS
Q113 DTC114YS
Q112 DTC114YS
FL
FR
CENTER
SL
SR
POSIS
TO CF
DC_PROTECT
PROTECT_SENSE
OVR_PROTECT
D132 1SS133T
Q179 2SA916
R181 4R7(1W)-R
R178 15K
C175 4.7/50
R179 47K(1/4W)
C1718 100N
D135 1SS133T
C177 1/50
D133 MTZJ10B
D134 MTZJ10B
R180 10K
C176 1/50
C178 330/63
R185 1(1/4W)-R
D138 1N4007
R176 47K
Q178 KTA1266
Q171B KTA1268
R171B 100K
Q173 KTC3198Y
C174 10/35
R177 47K
Q177 KTC3198Y
Q174 KTC3198Y
C172 220/6.3
R160 10K
R158 4K7
IC103 7805
D152 MTZJ20B
Q151 2SC1740S
R159 20K
C161 10/35
D160 1SS133
IC104 7805
C155 100N
C154 10/35
CHASISS GND
IC101 7815
R147 27K
R145 27K
R146 27K
C146 1/50
D158 1SS133T
C144 4700/35
C148 1/50
D159 1SS133T
C145 1000/35
IC102 7915

⚠ INDICATES SAFETY CRITICAL COMPONENTS.
TO REDUCE THE RISK OF ELECTIC SHOCK, LEAKAC
CURRENT OR RESISTANCE MEASUREMENTS SHALL BE
CARRIED OUT (EXPOSED PARTS ARE ACCEPTABLY
INSULATED FROM THE SUPPLY CIRCUIT) BEFORE
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current exceeds 0.5 milliamps, or if the resistance from chassis to eithe
of the power card is less than 460kohms, the unit is defective.

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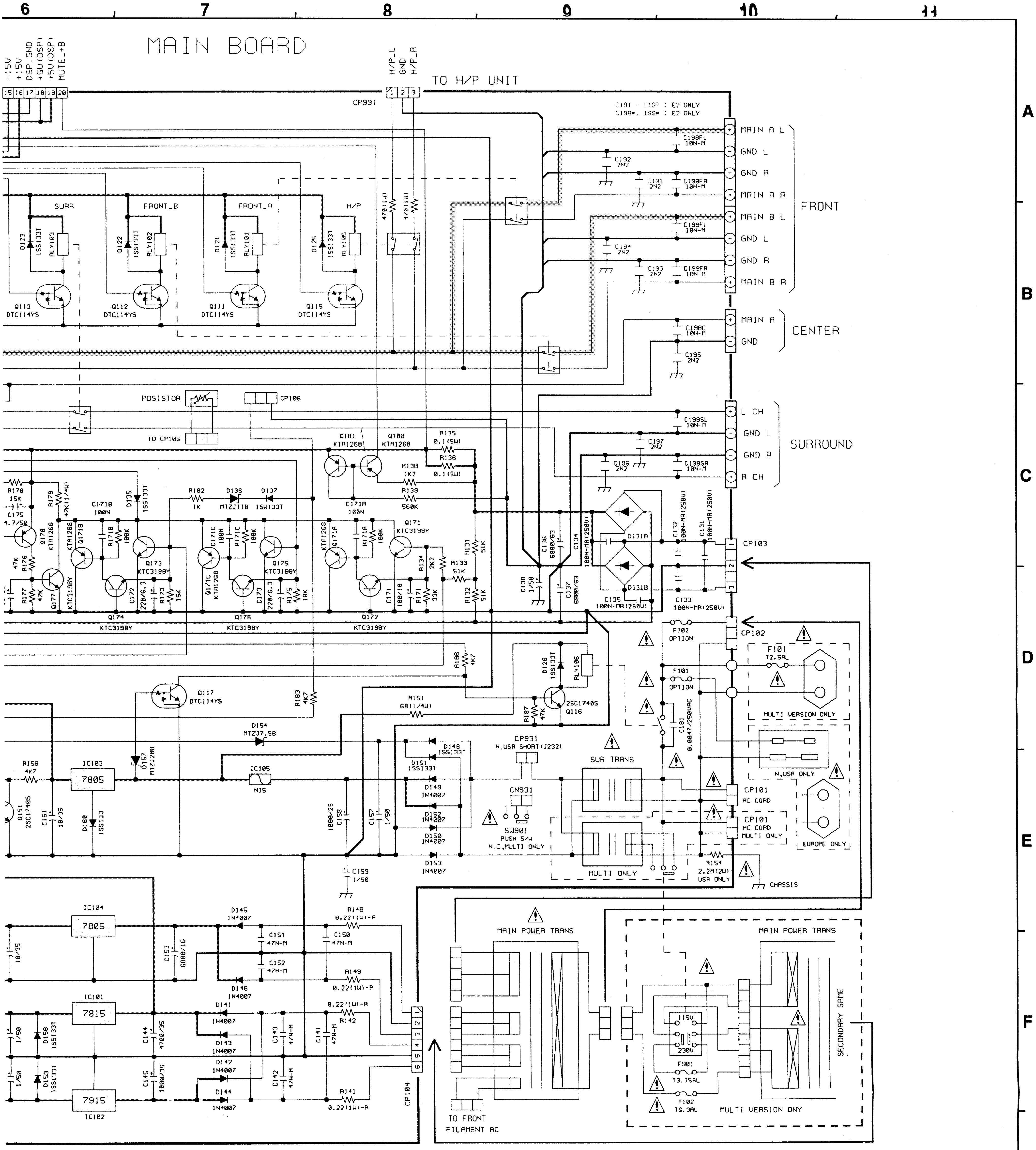
corrected.


MAIN BOARD
-15V
+15V
DSP_GND
+5V(DSP)
+5V(DSP)
MUTE_+B
H/P_L
GND
H/P_R
TO H/P UNIT
CP991
C191 - C197 : E2 ONLY
C198*, 199* : E2 ONLY
MAIN A L
GND L
GND R
MAIN A R
MAIN B L
GND L
GND R
MAIN B R
FRONT
MAIN A
GND
CENTER
L CH
GND L
GND R
R CH
SURROUND
SURR
FRONT_B
FRONT_A
H/P
RLY103
RLY102
RLY101
RLY105
Q113 DTC114YS
Q112 DTC114YS
Q111 DTC114YS
Q115 DTC114YS
POSISTOR
CP106
TO CP106
Q181 KTA1268
Q180 KTA1268
R135 0.1(5W)
R136 0.1(5W)
CP103
CP102
F102 OPTION
F101 T2.5AL
F101 OPTION
MULTI VERSION ONLY
RLY106
Q116 2SC1740S
Q117 DTC114YS
D154 MTZJ7.5B
IC103 7805
IC105 N15
CP931 N,USA SHORT(J232)
CN931
SW901 PUSH S/W N,C,MULTI ONLY
SUB TRANS
MULTI ONLY
N,USA ONLY
CP101 AC CORD
CP101 AC CORD MULTI ONLY
EUROPE ONLY
R154 2.2M(2W) USA ONLY
CHASSIS
IC104 7805
IC101 7815
IC102 7915
CP104
MAIN POWER TRANS
TO FRONT FILAMENT AC
115V
230V
F901 T3.15AL
F102 T6.3AL
MULTI VERSION ONY
SECONDARY SAME
6
7
8
9
10
11
A
B
C
D
E
F
G
H

TICAL COMPONENTS.
LECTIC SHOCK, LEAKAGE
MEASUREMENTS SHALL BE
PARTS ARE ACCEPTABLY
PLY CIRCUIT) BEFORE
TO THE CUSTOMER.

	F101	F102	F901	POSITION
N	T8A	T8A	X	MAIN B'D
E3	8A/125V	8A/125V	X	MAIN B'D
E2	T2.5AL	T3.15AL	X	MAIN B'D
C	X	T3.15AL	X	MAIN B'D
H,T,E1	T2.5AL	T6.3AL	T3.15AL	V.SEL B'D

——— + B LINE

— — — - B LINE

▨ SIGNAL LINE

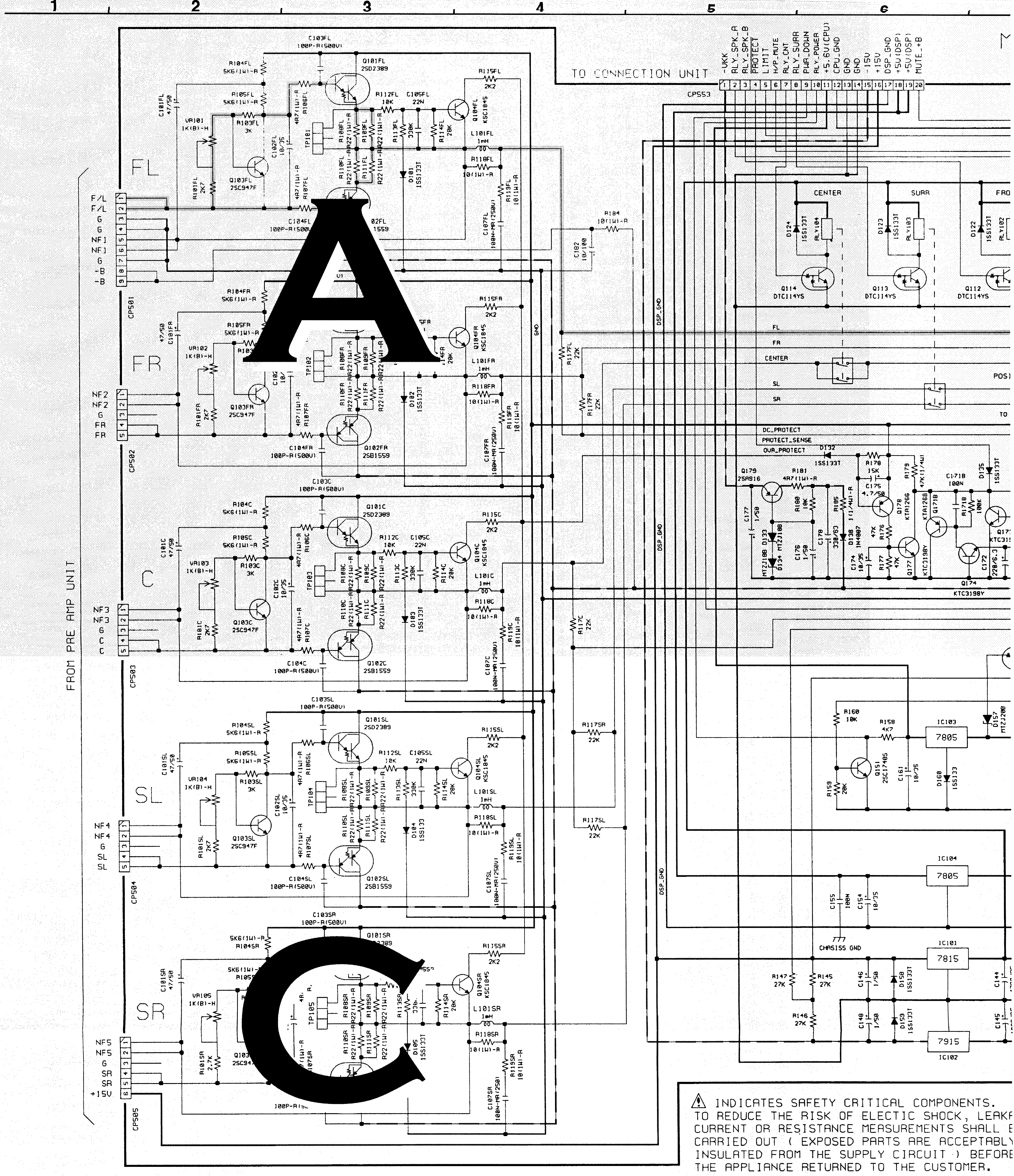
▭ have critical characteristics.
mmended by the manufacture.

stomer, make sure you make either (1) a
to chassis resistance check. If the leakage
f the resistance from chassis to either side
ohms, the unit is defective.

omer until the problem is located and

SCHEMATIC DIAGRAMS(5/7)
MAIN P.W.B. UNIT

SCHEMATIC DIAGRAMS(5/7)


1
2
3
4
5
6
A
C
TO CONNECTION UNIT
CP553
-VKK
RLY_SPK_A
RLY_SPK_B
PROTECT
LIMIT
H/P_MUTE
RLY_CNT
RLY_SURR
PWR_DOWN
RLY_POWER
+5.6V(CPU)
CPU_GND
GND
GND
-15V
+15V
DSP_GND
+5V(DSP)
+5V(DSP)
MUTE_+B
FROM PRE AMP UNIT
FL
FR
C
SL
SR
F/L
F/L
G
G
NF1
NF1
G
-B
-B
CP501
NF2
NF2
G
FR
FR
CP502
NF3
NF3
G
C
C
CP503
NF4
NF4
G
SL
SL
CP504
NF5
NF5
G
SR
SR
+15V
CP505
Q101FL 2SD2389
Q102FL 2SB1559
Q103FL 2SC947F
Q104FL KSC1845
C103FL 100P-R(500V)
C104FL 100P-R(500V)
R104FL 5K6(1W)-R
R105FL 5K6(1W)-R
VR101 1K(B)-H
R103FL 3K
R101FL 2K7
C101FL 47/50
C102FL 10/35
R112FL 10K
C105FL 22N
R115FL 2K2
R113FL 330K
R114FL 20K
L101FL 1mH
R118FL 10(1W)-R
R119FL 10(1W)-R
C107FL 100N-MR(250V)
D101 1SS133T
TP101
R184 10(1W)-R
C182 10/100
R117FL 22K
R117FR 22K
R117C 22K
R117SR 22K
R117SL 22K
GND
DSP_GND
CENTER
SURR
FRO
RLY104
RLY103
D124 1SS133T
D123 1SS133T
D122 1SS133T
Q114 DTC114YS
Q113 DTC114YS
Q112 DTC114YS
FL
FR
CENTER
SL
SR
POSI
TO
DC_PROTECT
PROTECT_SENSE
OVR_PROTECT
D132 1SS133T
Q179 2SA916
R181 4R7(1W)-R
R178 15K
C175 4.7/50
R179 47K(1/4W)
C171B 100N
Q178 KTA1266
Q174 KTC3198Y
Q177 KTC3198Y
R160 10K
R158 4K7
Q151 2SC1740S
C161 10/35
D160 1SS133
R159 20K
D157 MTZJ20B
IC103 7805
IC104 7805
C155 100N
C154 10/35
CHASISS GND
IC101 7815
IC102 7915
R147 27K
R145 27K
R146 27K
C146 1/50
C148 1/50
D158 1SS133T
D159 1SS133T

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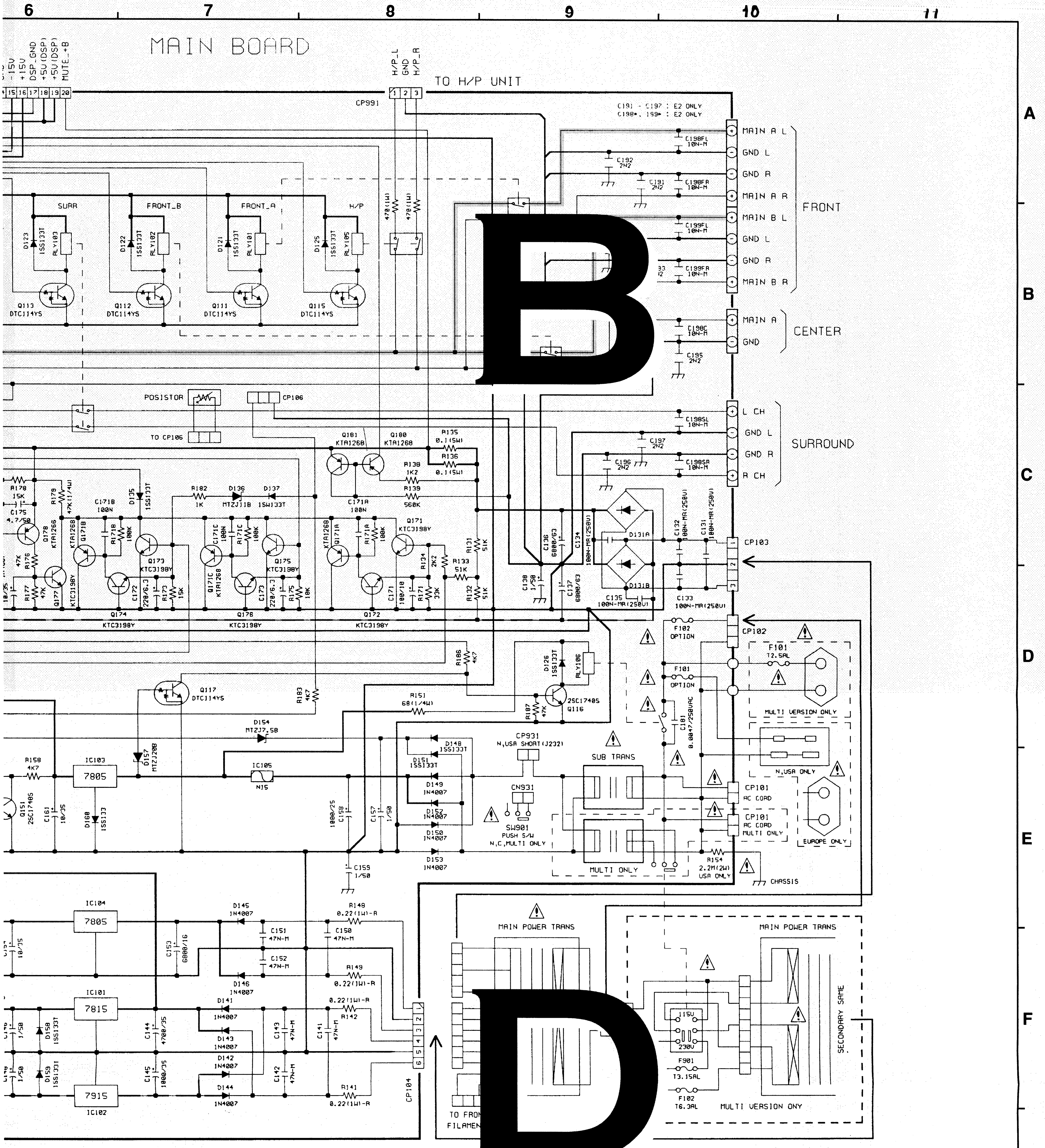
MAIN BOARD
-15V
+15V
DSP_GND
+5V(DSP)
+5V(DSP)
MUTE_+B
H/P_L
GND
H/P_R
TO H/P UNIT
CP991
C191 - C197 : E2 ONLY
C198*, 199* : E2 ONLY
MAIN A L
GND L
GND R
MAIN A R
MAIN B L
GND L
GND R
MAIN B R
FRONT
MAIN A
GND
CENTER
L CH
GND L
GND R
R CH
SURROUND
SURR
FRONT_B
FRONT_A
H/P
RLY103
RLY102
RLY101
RLY105
Q113 DTC114YS
Q112 DTC114YS
Q111 DTC114YS
Q115 DTC114YS
POSISTOR
CP106
TO CP106
Q181 KTA1268
Q180 KTA1268
R135 0.1(5W)
R136 0.1(5W)
Q173 KTC3198Y
Q175 KTC3198Y
Q171 KTC3198Y
Q174 KTC3198Y
Q176 KTC3198Y
Q172 KTC3198Y
D131A
D131B
CP103
CP102
F102 OPTION
F101 OPTION
F101 T2.5AL
MULTI VERSION ONLY
N,USA ONLY
CP101 AC CORD
CP101 AC CORD MULTI ONLY
EUROPE ONLY
Q117 DTC114YS
2SC1740S Q116
RLY106
CP931 N,USA SHORT(J232)
SUB TRANS
CN931
SW901 PUSH S/W N,C,MULTI ONLY
MULTI ONLY
R154 2.2M(2W) USA ONLY
CHASSIS
IC103 7805
IC105 NJ5
IC104 7805
IC101 7815
IC102 7915
CP104
MAIN POWER TRANS
MAIN POWER TRANS
SECONDARY SAME
115V
230V
F901 T3.15AL
F102 T6.3AL
MULTI VERSION ONY
TO FRON
FILAMEN
6
7
8
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10
11
A
B
C
D
E
F
B
D

ITICAL COMPONENTS.
ELECTIC SHOCK, LEAKAGE
MEASUREMENTS SHALL BE
PARTS ARE ACCEPTABLY
PLY CIRCUIT) BEFORE
TO THE CUSTOMER.

	F101	F102	F901	POSITION
N	T8A	T8A	X	MAIN B'D
E3	8A/125V	8A/125V	X	MAIN B'D
E2	T2.5AL	T3.15AL	X	MAIN B'D
C	X	T3.15AL	X	MAIN B'D
H,T,E1	T2.5AL	T6.3AL	T3.15AL	V.SEL B'D

——— +B LINE

– – – – B LINE

▨ SIGNAL LINE

▨ have critical characteristics.
ommended by the manufacture.

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to chassis resistance check. If the leakage
if the resistance from chassis to either side
kohms, the unit is defective.

tomer until the problem is located and

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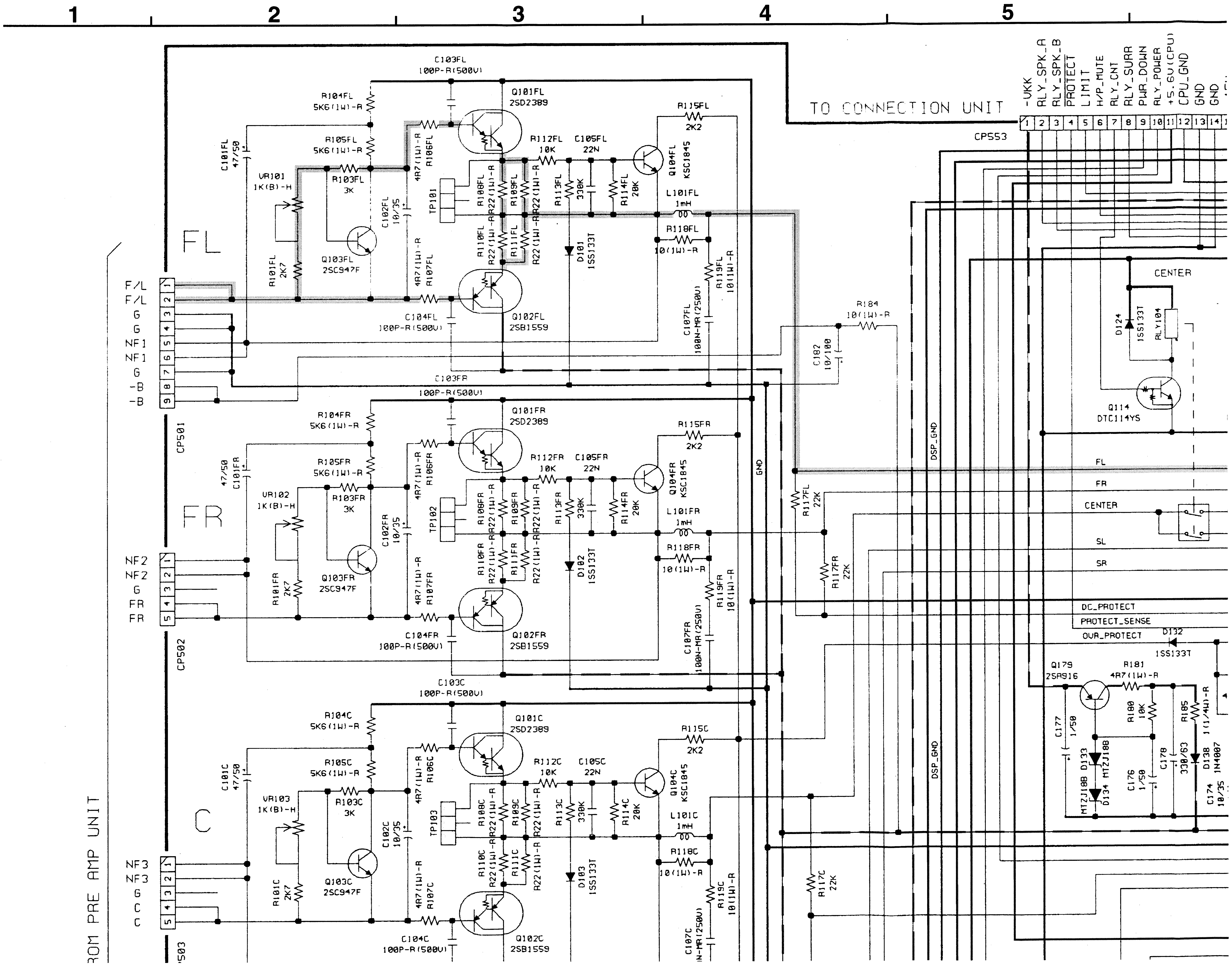
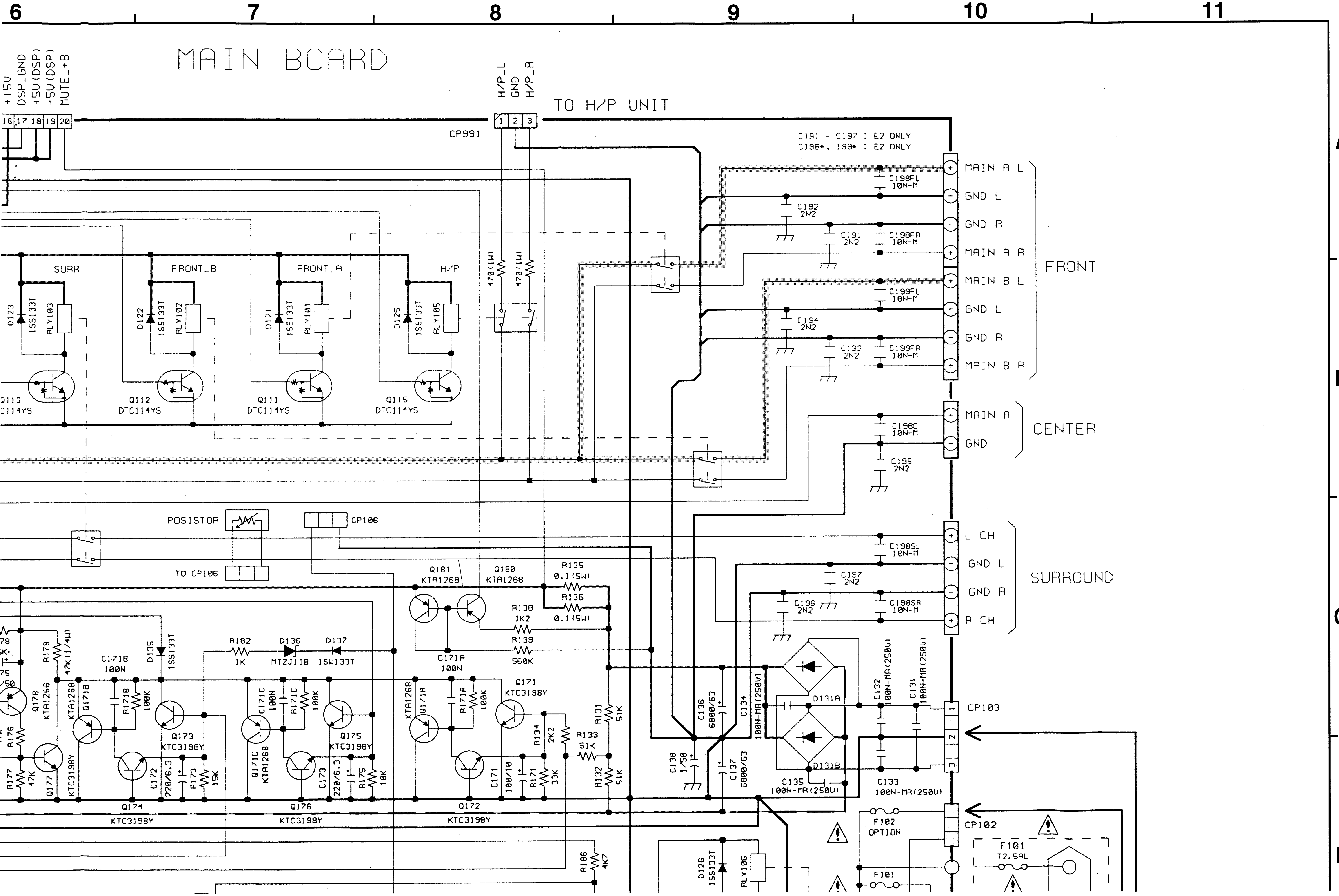
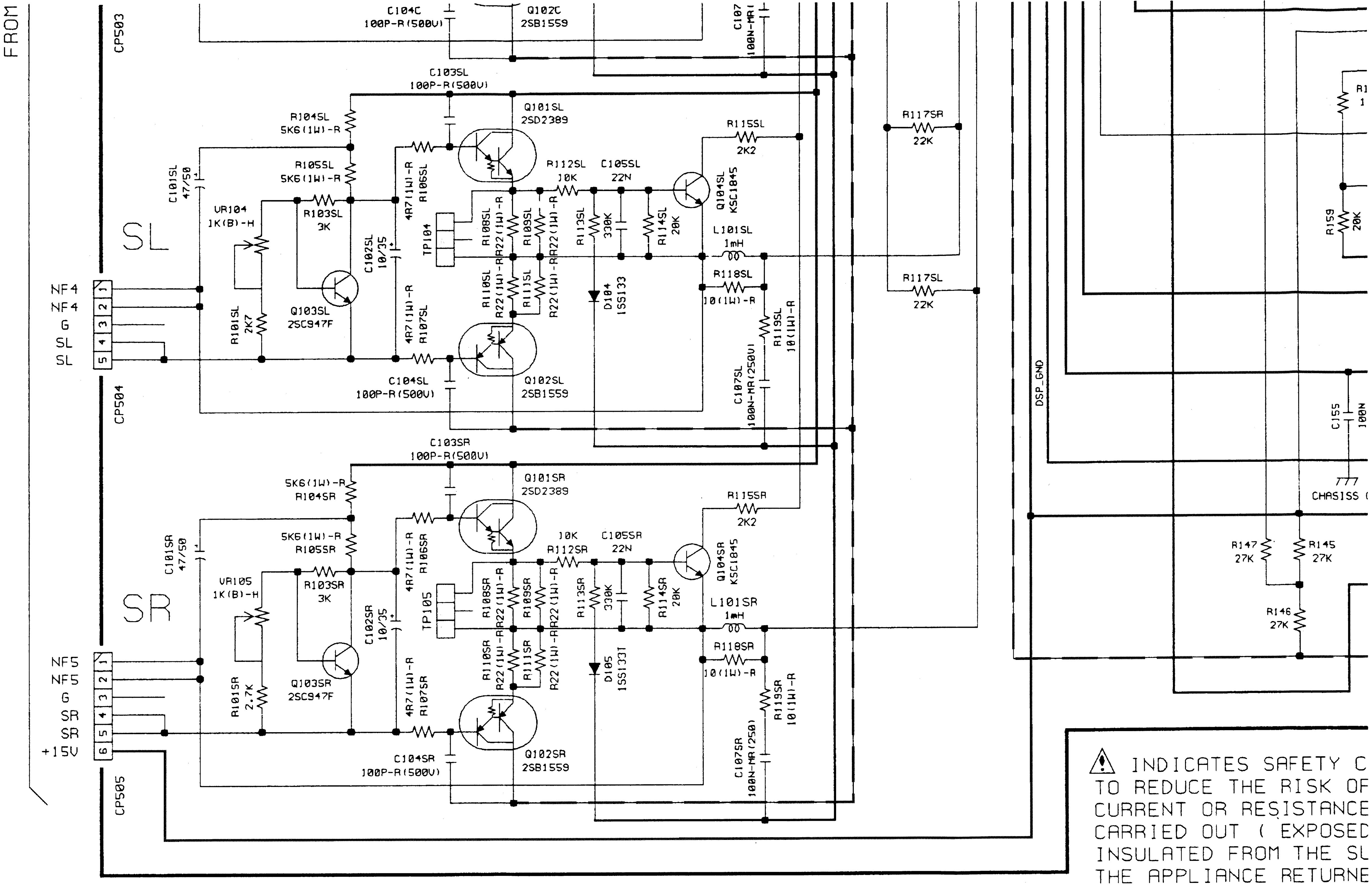
SCHEMATIC DIAGRAMS(5/7)
MAIN P.W.B. UNIT

SCHEMATIC DIAGRAMS(5/7)


1
2
3
4
5
TO CONNECTION UNIT
CP553
-VKK
RLY_SPK_A
RLY_SPK_B
PROTECT
LIMIT
H/P_MUTE
RLY_CNT
RLY_SURR
PWR_DOWN
RLY_POWER
+5.6V(CPU)
CPU_GND
GND
GND
FL
FR
C
F/L
F/L
G
G
NF1
NF1
G
-B
-B
CP501
NF2
NF2
G
FR
FR
CP502
NF3
NF3
G
C
C
ROM PRE AMP UNIT
C103FL
100P-R(500V)
R104FL
5K6(1W)-R
R105FL
5K6(1W)-R
C101FL
47/50
VR101
1K(B)-H
R103FL
3K
Q103FL
2SC947F
R101FL
2K7
C102FL
10/35
4R7(1W)-R
R106FL
4R7(1W)-R
R107FL
Q101FL
2SD2389
Q102FL
2SB1559
C104FL
100P-R(500V)
TP101
R108FL
R22(1W)-R
R109FL
R22(1W)-R
R110FL
R22(1W)-R
R111FL
R22(1W)-R
R112FL
10K
C105FL
22N
R113FL
330K
R114FL
20K
D101
1SS133T
R115FL
2K2
Q104FL
KSC1845
L101FL
1mH
R118FL
10(1W)-R
R119FL
10(1W)-R
C107FL
100N-MR(250V)
C103FR
100P-R(500V)
R104FR
5K6(1W)-R
R105FR
5K6(1W)-R
C101FR
47/50
VR102
1K(B)-H
R103FR
3K
Q103FR
2SC947F
R101FR
2K7
C102FR
10/35
4R7(1W)-R
R106FR
4R7(1W)-R
R107FR
Q101FR
2SD2389
Q102FR
2SB1559
C104FR
100P-R(500V)
TP102
R108FR
R22(1W)-R
R109FR
R22(1W)-R
R110FR
R22(1W)-R
R111FR
R22(1W)-R
R112FR
10K
C105FR
22N
R113FR
330K
R114FR
20K
D102
1SS133T
R115FR
2K2
Q104FR
KSC1845
L101FR
1mH
R118FR
10(1W)-R
R119FR
10(1W)-R
C107FR
100N-MR(250V)
C103C
100P-R(500V)
R104C
5K6(1W)-R
R105C
5K6(1W)-R
C101C
47/50
VR103
1K(B)-H
R103C
3K
Q103C
2SC947F
R101C
2K7
C102C
10/35
4R7(1W)-R
R106C
4R7(1W)-R
R107C
Q101C
2SD2389
Q102C
2SB1559
C104C
100P-R(500V)
TP103
R108C
R22(1W)-R
R109C
R22(1W)-R
R110C
R22(1W)-R
R111C
R22(1W)-R
R112C
10K
C105C
22N
R113C
330K
R114C
20K
D103
1SS133T
R115C
2K2
Q104C
KSC1845
L101C
1mH
R118C
10(1W)-R
R119C
10(1W)-R
C107C
N-MR(250V)
R184
10(1W)-R
C182
10/100
GND
DSP_GND
DSP_GND
R117FL
22K
R117FR
22K
R117C
22K
CENTER
D124
1SS133T
RLY104
Q114
DTC114YS
FL
FR
CENTER
SL
SR
DC_PROTECT
PROTECT_SENSE
OVR_PROTECT
D132
1SS133T
Q179
2SA916
R181
4R7(1W)-R
C177
1/50
R180
10K
R185
1(1/4W)-R
D133
MTZJ18B
D134
MTZJ18B
C176
1/50
C178
330/63
D138
1N4007
C174
10/35


6
7
8
9
10
11
A
B
C
D
MAIN BOARD
+15V
DSP_GND
+5V(DSP)
+5V(DSP)
MUTE_+B
H/P_L
GND
H/P_R
TO H/P UNIT
CP991
C191 - C197 : E2 ONLY
C198*, 199* : E2 ONLY
MAIN A L
GND L
GND R
MAIN A R
MAIN B L
GND L
GND R
MAIN B R
FRONT
MAIN A
GND
CENTER
L CH
GND L
GND R
R CH
SURROUND
C198FL 10N-M
C192 2N2
C191 2N2
C198FR 10N-M
C199FL 10N-M
C194 2N2
C193 2N2
C199FR 10N-M
C198C 10N-M
C195 2N2
C198SL 10N-M
C197 2N2
C196 2N2
C198SR 10N-M
SURR
FRONT_B
FRONT_A
H/P
D123 1SS133T
RLY103
D122 1SS133T
RLY102
D121 1SS133T
RLY101
D125 1SS133T
RLY105
Q113 DTC114YS
Q112 DTC114YS
Q111 DTC114YS
Q115 DTC114YS
470(1W)
470(1W)
POSISTOR
CP106
TO CP106
Q181 KTA1268
Q180 KTA1268
R135 0.1(5W)
R136 0.1(5W)
R138 1K2
R139 560K
R182 1K
D136 MTZJ11B
D137 1SS133T
C171A 100N
D135 1SS133T
C171B 100N
R179 47K(1/4W)
Q178 KTA1266
Q171B KTA1268
R171B 100K
Q173 KTC3198Y
Q177 KTC3198Y
R176
R177 47K
Q174 KTC3198Y
C172 220/6.3
R173 15K
Q171C KTA1268
C171C 100N
R171C 100K
Q175 KTC3198Y
Q176 KTC3198Y
C173 220/6.3
R175 10K
Q171A KTA1268
R171A 100K
Q171 KTC3198Y
Q172 KTC3198Y
C171 100/10
R171 33K
R134 2K2
R133 51K
R131 51K
R132 51K
C138 1/50
C136 6800/63
C137 6800/63
C134 100N-MR(250V)
D131A
D131B
C135 100N-MR(250V)
C132 100N-MR(250V)
C131 100N-MR(250V)
C133 100N-MR(250V)
CP103
CP102
F102 OPTION
F101 T2.5AL
F101
R186 4K7
D126 1SS133T
RLY106


FROM
CP503
CP504
CP505
C104C 100P-R(500V)
Q102C 2SB1559
C107 100N-MR(
C103SL 100P-R(500V)
R104SL 5K6(1W)-R
Q101SL 2SD2389
R105SL 5K6(1W)-R
C101SL 47/50
VR104 1K(B)-H
R103SL 3K
C102SL 10/35
4R7(1W)-R R106SL
TP104
R108SL R22(1W)-R
R109SL R22(1W)-R
R112SL 10K
C105SL 22N
R113SL 330K
R114SL 20K
Q104SL KSC1845
R115SL 2K2
L101SL 1mH
R118SL 10(1W)-R
R119SL 10(1W)-R
D104 1SS133
R110SL R22(1W)-R
R111SL R22(1W)-R
SL
NF4
NF4
G
SL
SL
R101SL 2K7
Q103SL 2SC947F
4R7(1W)-R R107SL
C104SL 100P-R(500V)
Q102SL 2SB1559
C107SL 100N-MR(250V)
R117SR 22K
R117SL 22K
C103SR 100P-R(500V)
5K6(1W)-R R104SR
Q101SR 2SD2389
C101SR 47/50
5K6(1W)-R R105SR
VR105 1K(B)-H
R103SR 3K
C102SR 10/35
4R7(1W)-R R106SR
TP105
R108SR R22(1W)-R
R109SR R22(1W)-R
10K R112SR
C105SR 22N
R113SR 330K
R114SR 20K
Q104SR KSC1845
R115SR 2K2
L101SR 1mH
R118SR 10(1W)-R
R119SR 10(1W)-R
D105 1SS133
R110SR R22(1W)-R
R111SR R22(1W)-R
SR
NF5
NF5
G
SR
SR
+15V
R101SR 2.7K
Q103SR 2SC947F
4R7(1W)-R R107SR
C104SR 100P-R(500V)
Q102SR 2SB1559
C107SR 100N-MR(250)
DSP_GND
R159 20K
C155 100N
CHASISS
R147 27K
R145 27K
R146 27K

⚠ INDICATES SAFETY C
TO REDUCE THE RISK OF
CURRENT OR RESISTANCE
CARRIED OUT (EXPOSE
INSULATED FROM THE S
THE APPLIANCE RETURNE

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

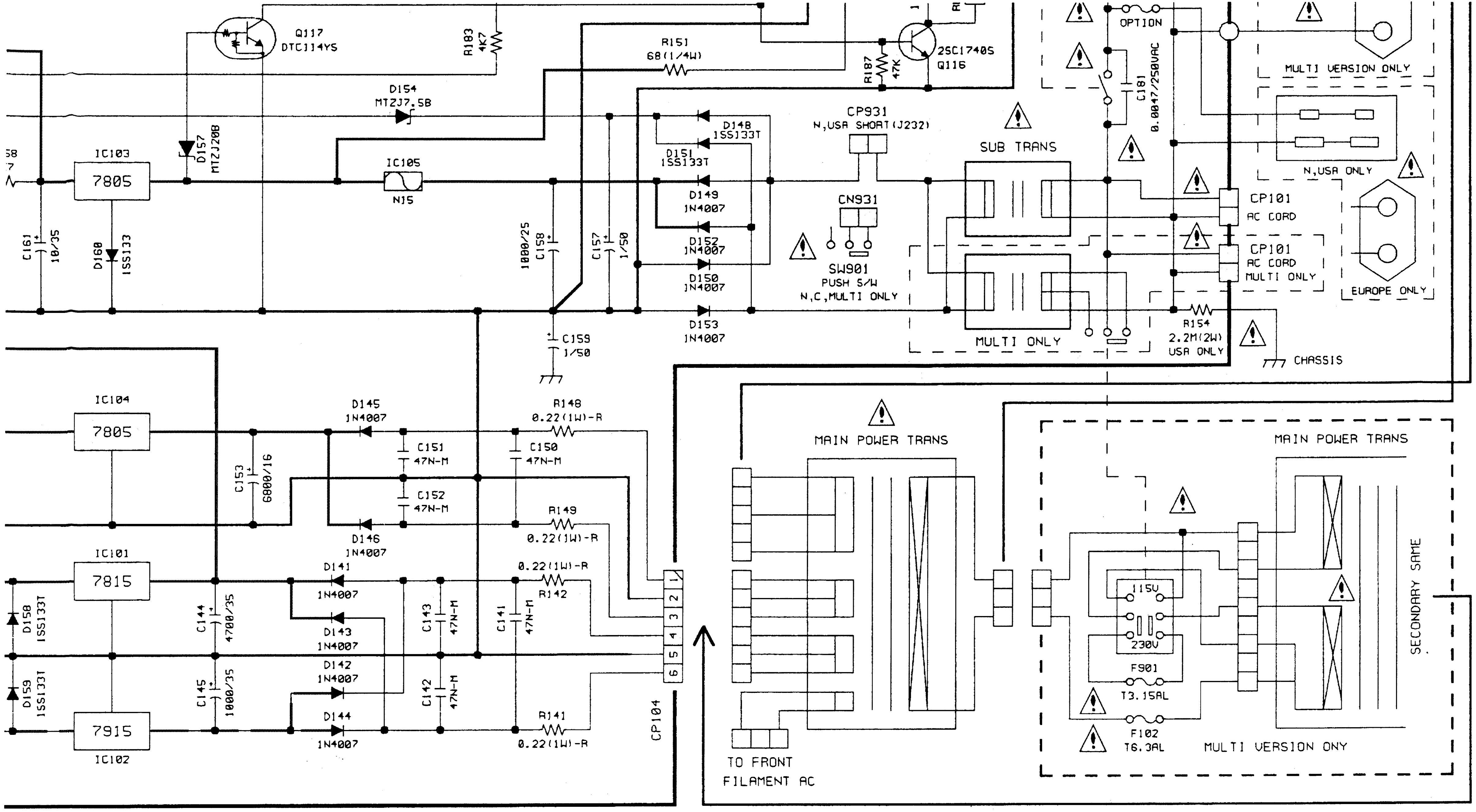
Parts marked with this symbol ⚠
Use ONLY replacement parts re

CAUTION:

Before returning the unit to the
leakage current check or (2) a li
current exceeds 0.5 milliamps,
of the power card is less than 4

WARNING:

DO NOT return the unit to the c
corrected.


Q117
DTC114YS
R183
4K7
R151
68(1/4W)
D154
MTZJ7.5B
R187
47K
2SC1740S
Q116
OPTION
C181
0.0047/250VAC
MULTI VERSION ONLY
N,USA ONLY
CP931
N,USA SHORT(J232)
SUB TRANS
D148
1SS133T
D151
1SS133T
D149
1N4007
D152
1N4007
D150
1N4007
D153
1N4007
IC103
7805
D157
MTZJ20B
IC105
NJ5
C161
10/35
D160
1SS133
C158
1000/25
C157
1/50
C159
1/50
CN931
SW901
PUSH S/W
N,C,MULTI ONLY
CP101
AC CORD
CP101
AC CORD
MULTI ONLY
EUROPE ONLY
MULTI ONLY
R154
2.2M(2W)
USA ONLY
CHASSIS
IC104
7805
D145
1N4007
R148
0.22(1W)-R
C151
47N-M
C150
47N-M
C153
6800/16
C152
47N-M
D146
1N4007
R149
0.22(1W)-R
IC101
7815
D141
1N4007
D143
1N4007
0.22(1W)-R
R142
C143
47N-M
C141
47N-M
D158
1SS133T
C144
4700/35
D159
1SS133T
C145
1000/35
D142
1N4007
C142
47N-M
D144
1N4007
R141
0.22(1W)-R
IC102
7915
CP104
MAIN POWER TRANS
TO FRONT
FILAMENT AC
MAIN POWER TRANS
115V
230V
FS901
T3.15AL
F102
T6.3AL
SECONDARY SAME
MULTI VERSION ONY

AL COMPONENTS.
TIC SHOCK, LEAKAGE
UREMENTS SHALL BE
S ARE ACCEPTABLY
CIRCUIT) BEFORE
THE CUSTOMER.

	F101	F102	FS901	POSITION
N	T8A	T8A	X	MAIN B'D
E3	8A/125V	8A/125V	X	MAIN B'D
E2	T2.5AL	T3.15AL	X	MAIN B'D
C	X	T3.15AL	X	MAIN B'D
H,T,E1	T2.5AL	T6.3AL	T3.15AL	V.SEL B'D

——— +B LINE

— — — - B LINE

▨ SIGNAL LINE

ve critical characteristics.
ded by the manufacture.

, make sure you make either (1) a
ssis resistance check. If the leakage
esistance from chassis to either side
, the unit is defective.

until the problem is located and

E

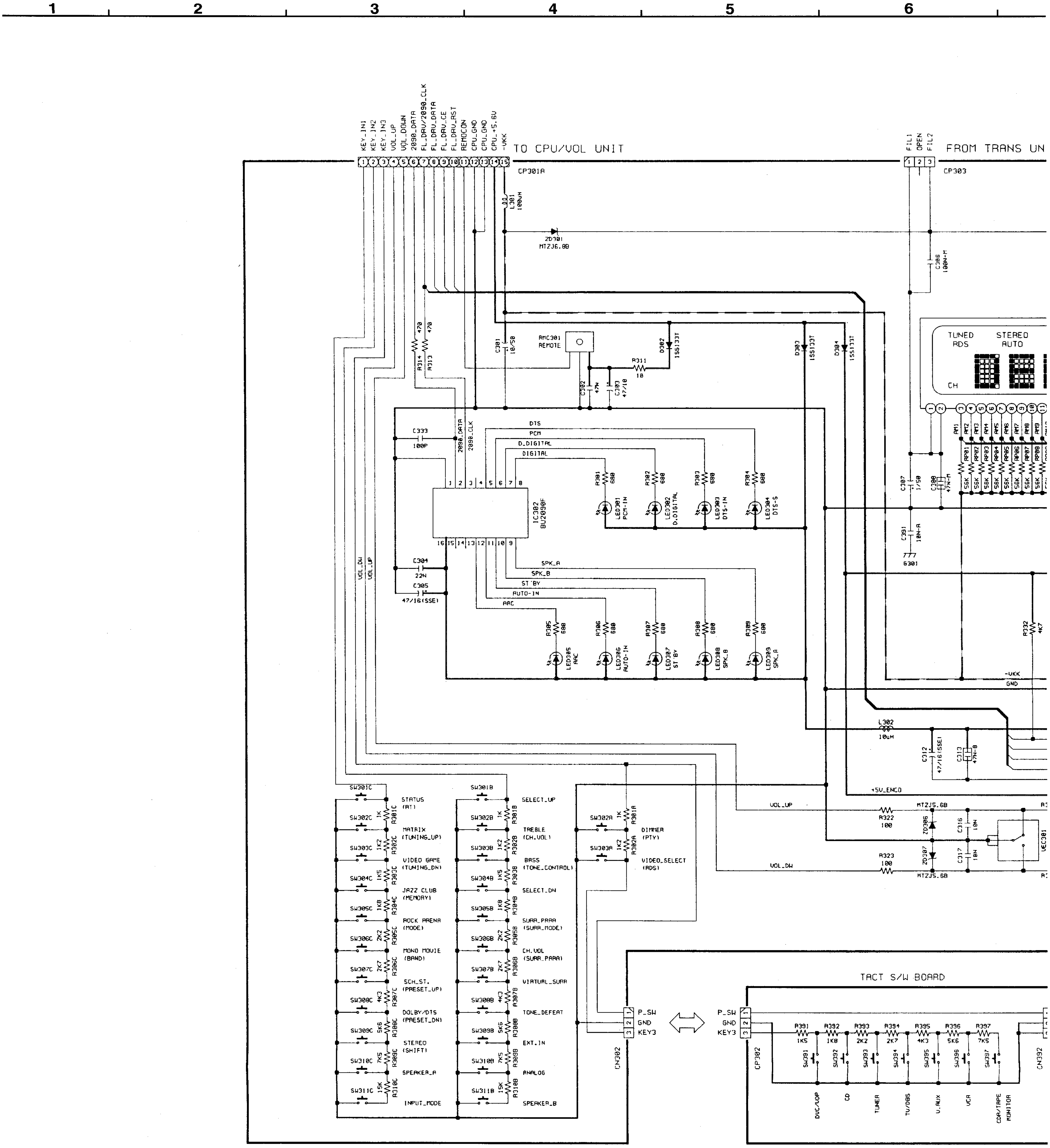
F

G

H

SCHEMATIC DIAGRAMS(5/7)
MAIN P.W.B. UNIT

SCHEMATIC DIAGRAMS(6/7)

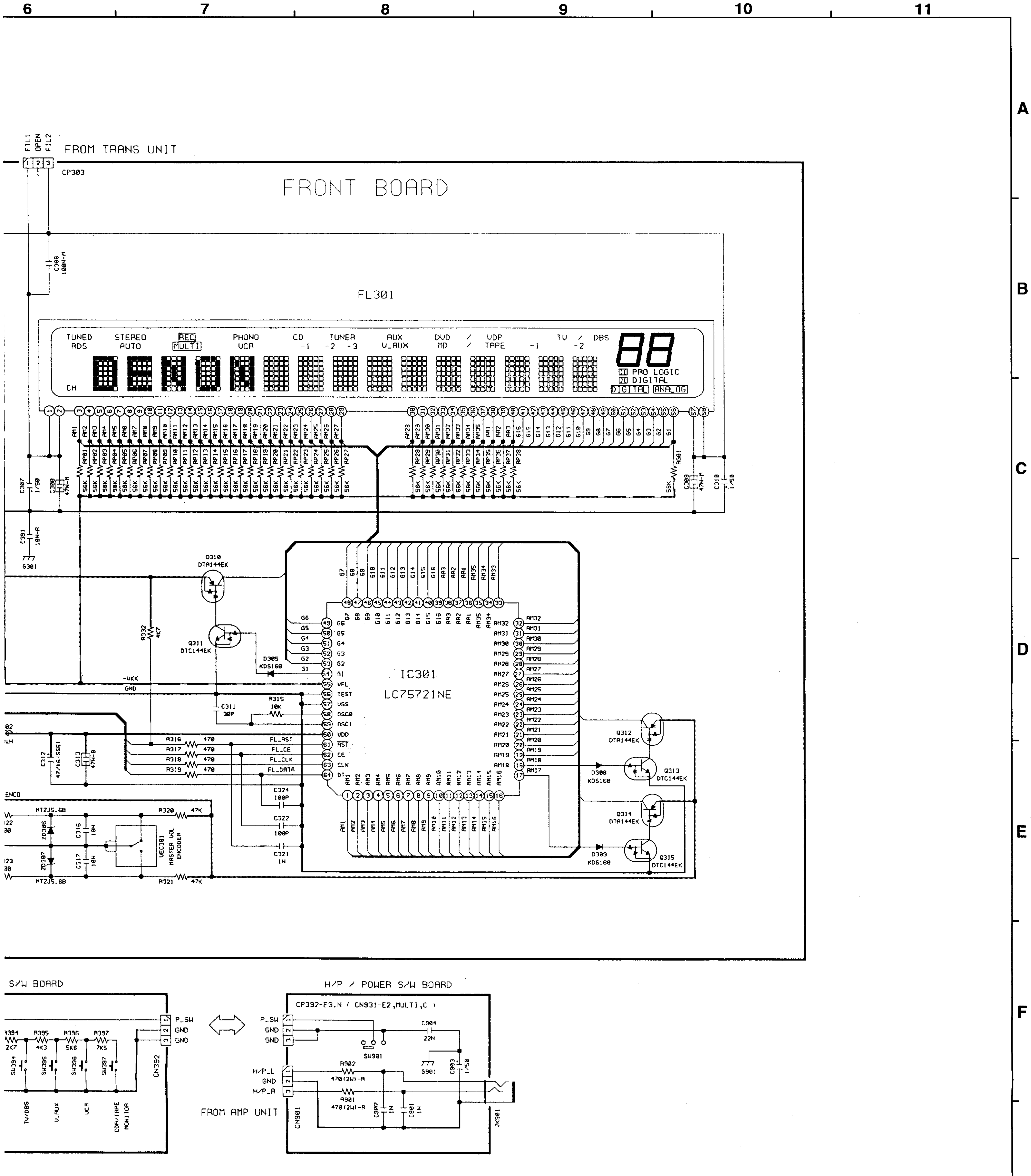

1
2
3
4
5
6
KEY_IN1
KEY_IN2
KEY_IN3
VOL_UP
VOL_DOWN
2090_DATA
FL_DRV/2090_CLK
FL_DRV_DATA
FL_DRV_CE
FL_DRV_RST
REMOCON
CPU_GND
CPU_GND
CPU_+5.6V
-VKK
TO CPU/VOL UNIT
CP301A
L301 100uH
ZD301 MTZJ6.8B
FIL1
OPEN
FIL2
FROM TRANS UN
CP303
C306 100N-M
R314 470
R313 470
C301 10/50
RMC301 REMOTE
R311 10
D302 1SS133T
C302 47N
C303 47/10
D303 1SS133T
D304 1SS133T
TUNED
RDS
STEREO
AUTO
CH
C333 100P
2090_DATA
2090_CLK
DTS
PCM
D_DIGITAL
DIGITAL
IC302 BU2090F
R301 680
R302 680
R303 680
R304 680
LED301 PCM-IN
LED302 D.DIGITAL
LED303 DTS-IN
LED304 DTS-S
C304 22N
C305 47/16(SSE)
SPK_A
SPK_B
ST'BY
AUTO-IN
ARC
VOL_DW
VOL_UP
R305 680
R306 680
R307 680
R308 680
R309 680
LED305 ARC
LED306 AUTO-IN
LED307 ST BY
LED308 SPK_B
LED309 SPK_A
C307 1/50
C308 47N-M
C391 10N-A
G301
R332 4K7
-VKK
GND
L302 10uH
C312 47/16(SSE)
C313 47N-B
+5V_ENCO
SW301C STATUS (RT)
SW302C R301C 1K MATRIX (TUNING_UP)
SW303C R302C 1K2 VIDEO GAME (TUNING_DN)
SW304C R303C 1K5 JAZZ CLUB (MEMORY)
SW305C R304C 1K8 ROCK ARENA (MODE)
SW306C R305C 2K2 MONO MOVIE (BAND)
SW307C R306C 2K7 5CH_ST. (PRESET_UP)
SW308C R307C 4K3 DOLBY/DTS (PRESET_DN)
SW309C R308C 5K6 STEREO (SHIFT)
SW310C R309C 7K5 SPEAKER_A
SW311C R310C 15K INPUT_MODE
SW301B SELECT_UP
SW302B R301B 1K TREBLE (CH.VOL)
SW303B R302B 1K2 BASS (TONE_CONTROL)
SW304B R303B 1K5 SELECT_DN
SW305B R304B 1K8 SURR_PARA (SURR_MODE)
SW306B R305B 2K2 CH.VOL (SURR_PARA)
SW307B R306B 2K7 VIRTUAL_SURR
SW308B R307B 4K3 TONE_DEFEAT
SW309B R308B 5K6 EXT.IN
SW310B R309B 7K5 ANALOG
SW311B R310B 15K SPEAKER_B
SW302A R301A 1K DIMMER (PTY)
SW303A R302A 1K2 VIDEO_SELECT (RDS)
VOL_UP
VOL_DW
R322 100
R323 100
MTZJ5.6B
ZD306
ZD307
C316 10N
C317 10N
MTZJ5.6B
VEC301
TACT S/W BOARD
CN302
P_SW
GND
KEY3
CP302
R391 1K5
R392 1K8
R393 2K2
R394 2K7
R395 4K3
R396 5K6
R397 7K5
SW391 DVD/VDP
SW392 CD
SW393 TUNER
SW394 TV/DBS
SW395 V.AUX
SW396 VCR
SW397 CDR/TAPE MONITOR
CN392

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:
Parts marked with this
Use ONLY replacemen

CAUTION:
Before returning the un
leakage current check
current exceeds 0.5 mil
of the power card is les

WARNING:
DO NOT return the unit
corrected.


6
7
8
9
10
11
A
B
C
D
E
F
FIL1
OPEN
FIL2
FROM TRANS UNIT
CP303
FRONT BOARD
C306
100N-M
FL301
TUNED
RDS
STEREO
AUTO
REC
MULTI
PHONO
VCR
CD
-1
TUNER
-2 -3
AUX
V_AUX
DVD
MD
VDP
TAPE
TV
DBS
PRO LOGIC
DIGITAL
DIGITAL
ANALOG
CH
RA01
56K
C307
1/50
C308
47N-M
C309
47N-M
C310
1/50
C391
10N-R
G301
Q310
DTA144EK
Q311
DTC144EK
R332
4K7
D305
KDS160
-VKK
GND
C311
30P
R315
10K
IC301
LC75721NE
VFL
TEST
VSS
OSC0
OSC1
VDD
RST
CE
CLK
DT
R316
R317
R318
R319
470
FL_RST
FL_CE
FL_CLK
FL_DATA
C312
47/16(SSE)
C313
47N-B
C324
100P
C322
100P
C321
1N
Q312
DTA144EK
Q313
DTC144EK
Q314
DTA144EK
Q315
DTC144EK
D308
KDS160
D309
KDS160
ENCO
MTZJ5.6B
ZD306
ZD307
C316
10N
C317
10N
VEC301
MASTER VOL
ENCODER
R320
R321
47K
S/W BOARD
R394
R395
R396
R397
2K7
4K3
5K6
7K5
SW394
SW395
SW396
SW397
TV/DBS
V.AUX
VCR
CDR/TAPE
MONITOR
P_SW
GND
GND
CN392
H/P / POWER S/W BOARD
CP392-E3.N (CN931-E2,MULTI,C)
C904
22N
SW901
G901
C903
1/50
H/P_L
GND
H/P_R
R902
470(2W)-R
R901
470(2W)-R
C902
1N
C901
1N
FROM AMP UNIT
CN901
JK901

———— + B LINE

— — — - B LINE

WARNING:
Parts marked with this symbol ⚠ ☐ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

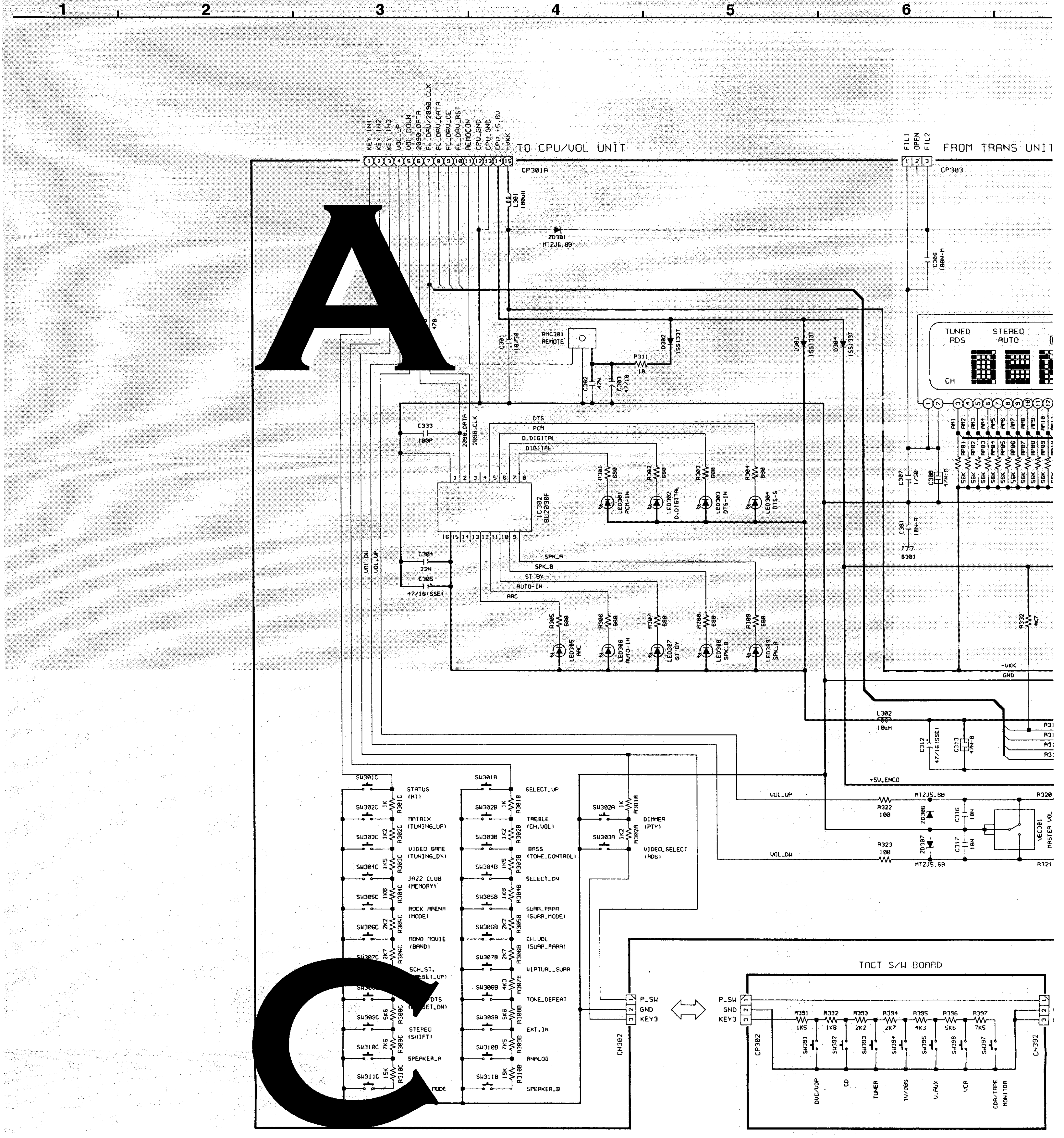
CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAMS(6/7)

FRONT P.W.B. UNIT
TACT S/W P.W.B. UNIT
H/P & POWER S/W P.W.B. UNIT

SCHEMATIC DIAGRAMS(6/7)


1
2
3
4
5
6
A
C
KEY_IN1
KEY_IN2
KEY_IN3
VOL_UP
VOL_DOWN
2090_DATA
FL_DRV/2090_CLK
FL_DRV_DATA
FL_DRV_CE
FL_DRV_RST
REMOCON
CPU_GND
CPU_GND
CPU_+5.6V
-VKK
TO CPU/VOL UNIT
CP301A
L301 100uH
ZD301 MTZJ6.8B
FIL1
OPEN
FIL2
FROM TRANS UNIT
CP303
C306 100N-M
RMC301 REMOTE
C301 10/50
C302 47N
C303 47/10
R311 10
D302 1SS133T
D303 1SS133T
D304 1SS133T
470
TUNED
RDS
STEREO
AUTO
CH
C333 100P
2090_DATA
2090_CLK
DTS
PCM
D_DIGITAL
DIGITAL
IC302 BU2090F
R301 680
R302 680
R303 680
R304 680
LED301 PCM-IN
LED302 D.DIGITAL
LED303 DTS-IN
LED304 DTS-S
C304 22N
C305 47/16(SSE)
SPK_A
SPK_B
ST BY
AUTO-IN
AAC
R305 680
R306 680
R307 680
R308 680
R309 680
LED305 AAC
LED306 AUTO-IN
LED307 ST'BY
LED308 SPK_B
LED309 SPK_A
VOL_DW
VOL_UP
C387 1/50
C388 47N-Z
C391 10N-R
G301
AM1
AM2
AM3
AM4
AM5
AM6
AM7
AM8
AM9
AM10
RP01
RP02
RP03
RP04
RP05
RP06
RP07
RP08
RP09
56K
R332 4K7
-VKK
GND
L302 10uH
C312 47/16(SSE)
C313 47N-B
+5V_ENCO
VOL_UP
VOL_DW
R322 100
R323 100
MTZJ5.6B
ZD306
ZD307
C316 10N
C317 10N
VEC301 MASTER VOL
R320
R321
SW301C
SW302C
SW303C
SW304C
SW305C
SW306C
SW307C
SW309C
SW310C
SW311C
R301C 1K
R302C 1K2
R303C 1K5
R304C 1K8
R305C 2K2
R306C 2K7
R308C 5K6
R309C 7K5
R310C 15K
STATUS (RT)
MATRIX (TUNING_UP)
VIDEO GAME (TUNING_DN)
JAZZ CLUB (MEMORY)
ROCK ARENA (MODE)
MONO MOVIE (BAND)
SCH_ST. (PRESET_UP)
DTS (PRESET_DN)
STEREO (SHIFT)
SPEAKER_A
MODE
SW301B
SW302B
SW303B
SW304B
SW305B
SW306B
SW307B
SW308B
SW309B
SW310B
SW311B
R301B 1K
R302B 1K2
R303B 1K5
R304B 1K8
R305B 2K2
R306B 2K7
R307B 4K3
R308B 5K6
R309B 7K5
R310B 15K
SELECT_UP
TREBLE (CH.VOL)
BASS (TONE_CONTROL)
SELECT_DN
SURR_PARA (SURR_MODE)
CH.VOL (SURR_PARA)
VIRTUAL_SURR
TONE_DEFEAT
EXT.IN
ANALOG
SPEAKER_B
SW302A
SW303A
R301A 1K
R302A 1K2
DIMMER (PTY)
VIDEO_SELECT (RDS)
P_SW
GND
KEY3
CN302
TACT S/W BOARD
P_SW
GND
KEY3
CP302
R391 1K5
R392 1K8
R393 2K2
R394 2K7
R395 4K3
R396 5K6
R397 7K5
SW391
SW392
SW393
SW394
SW395
SW396
SW397
DVD/ODP
CD
TUNER
TV/DBS
V.AUX
VCR
CDR/TAPE MONITOR
CN392

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

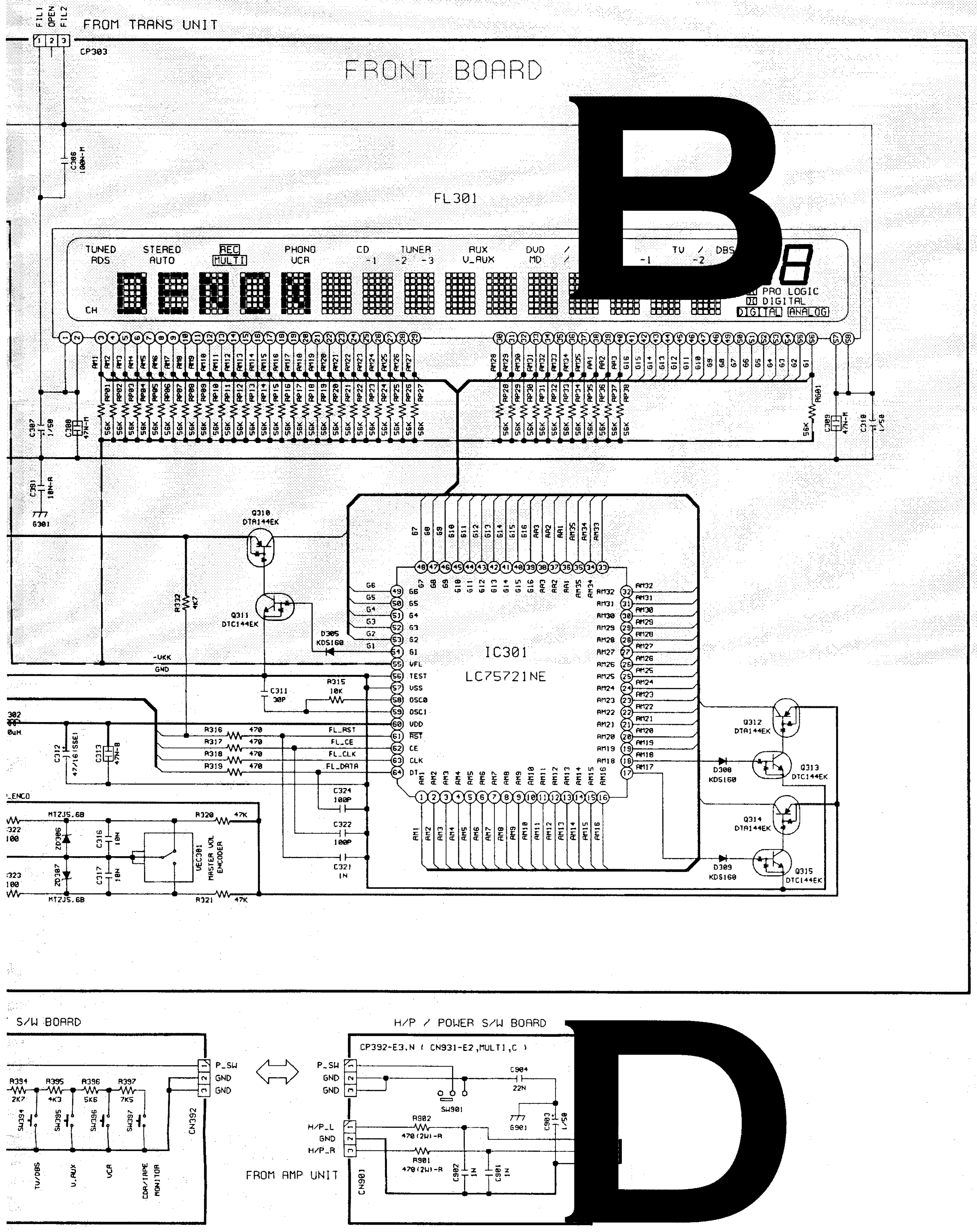
WARNING:
Parts marked with this sy
Use ONLY replacement p

CAUTION:
Before returning the unit t
leakage current check or
current exceeds 0.5 millia
of the power card is less t

WARNING:
DO NOT return the unit to
corrected.

6 7 8 9 10 11

A B C D E F G H


FIL1
OPEN
FIL2
FROM TRANS UNIT
CP303
FRONT BOARD
B
FL301
TUNED RDS
STEREO AUTO
REC MULTI
PHONO VCR
CD -1
TUNER -2 -3
AUX V_AUX
DVD MD
TV / DBS -1 -2
CH
PRO LOGIC
DIGITAL
DIGITAL ANALOG
C306 100N-M
C307 1/50
C308 47N-M
C309 47N-M
C310 1/50
C301 10N-A
G301
R601 56K
Q310 DTA144EK
Q311 DTC144EK
R332 4K7
D305 KDS160
-VKK
GND
C311 30P
R315 10K
R316 470
R317 470
R318 470
R319 470
FL_RST
FL_CE
FL_CLK
FL_DATA
C312 47/16(SSE)
C313 47N-B
C324 100P
C322 100P
C321 1N
IC301
LC75721NE
VFL
TEST
VSS
OSC0
OSC1
VDD
RST
CE
CLK
DI
Q312 DTA144EK
Q313 DTC144EK
Q314 DTA144EK
Q315 DTC144EK
D308 KDS160
D309 KDS160
MTZJ5.6B
R320 47K
R321 47K
ZD306
ZD307
C316 10N
C317 10N
VEC301 MASTER VOL ENCODER
S/W BOARD
R394 2K7
R395 4K3
R396 5K6
R397 7K5
SW394
SW395
SW396
SW397
TV/DBS
V.AUX
VCR
CDR/TAPE MONITOR
P_SW
GND
GND
CN392
H/P / POWER S/W BOARD
CP392-E3.N (CN931-E2,MULTI,C)
SW901
C904 22N
G901
C903 1/50
R902 470(2W)-R
R901 470(2W)-R
C902 1N
C901 1N
H/P_L
GND
H/P_R
FROM AMP UNIT
CN901
D

——— + B LINE

— — — – B LINE

WARNING:

Parts marked with this symbol ⚠ ▭ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

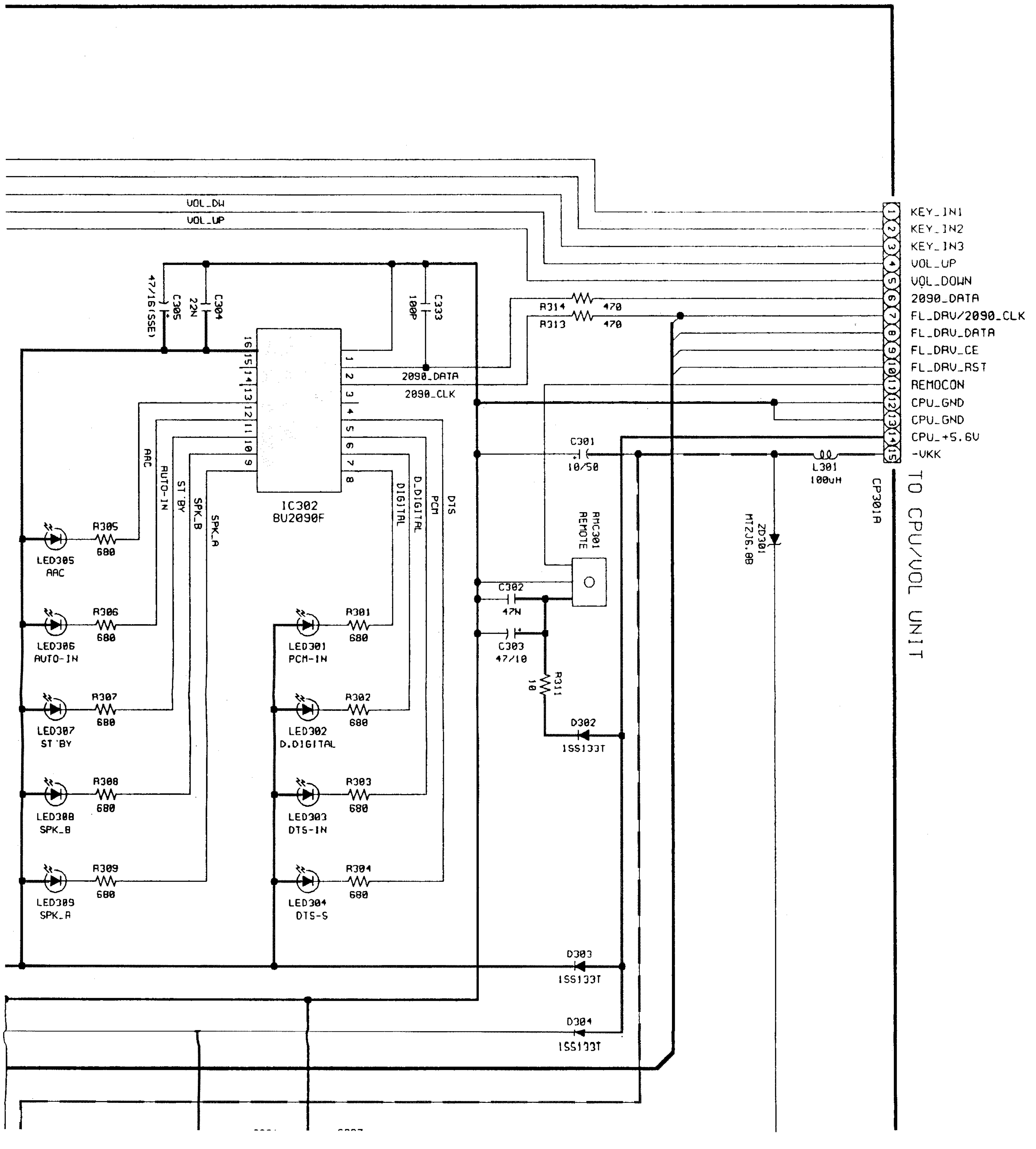
WARNING:

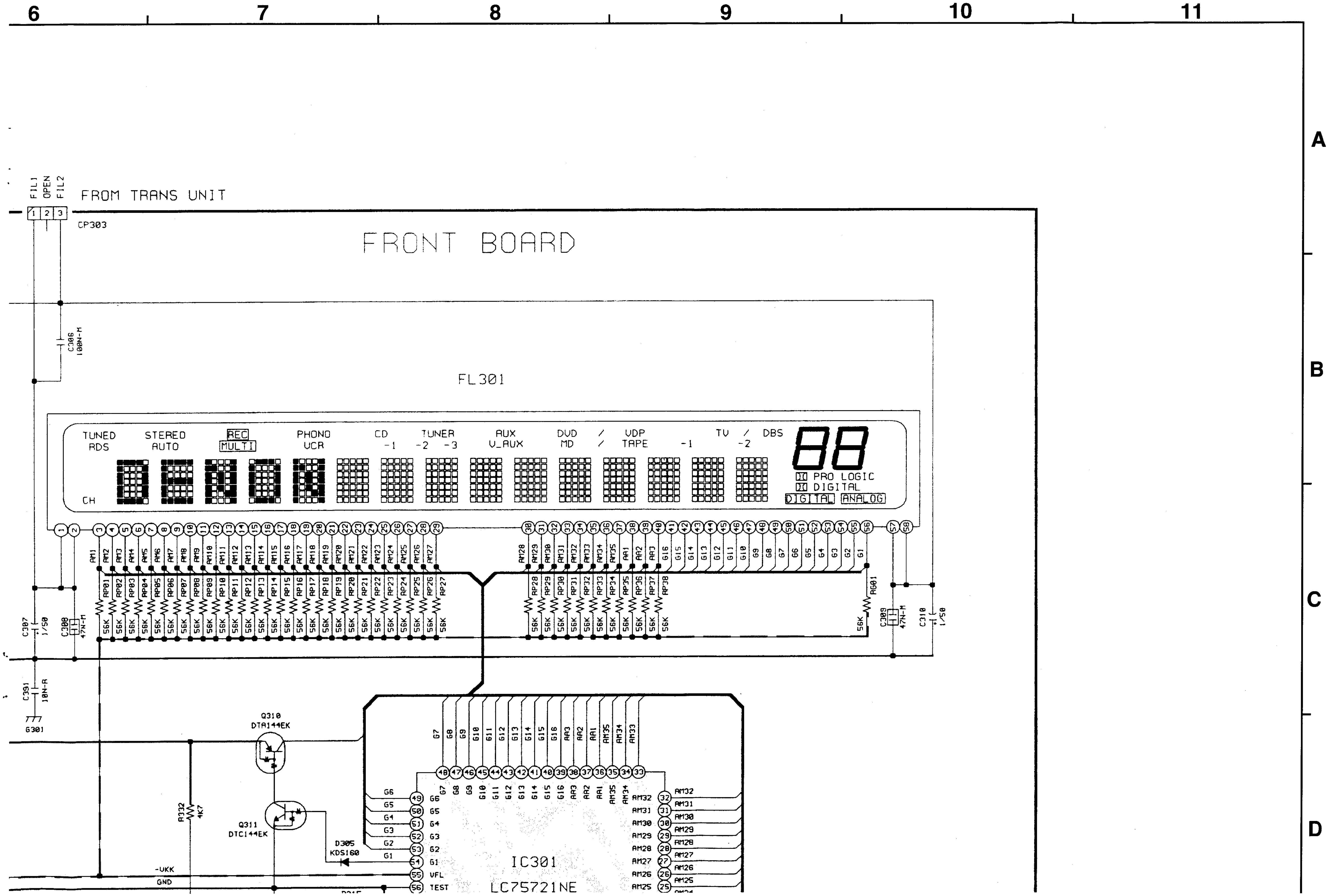
DO NOT return the unit to the customer until the problem is located and corrected.

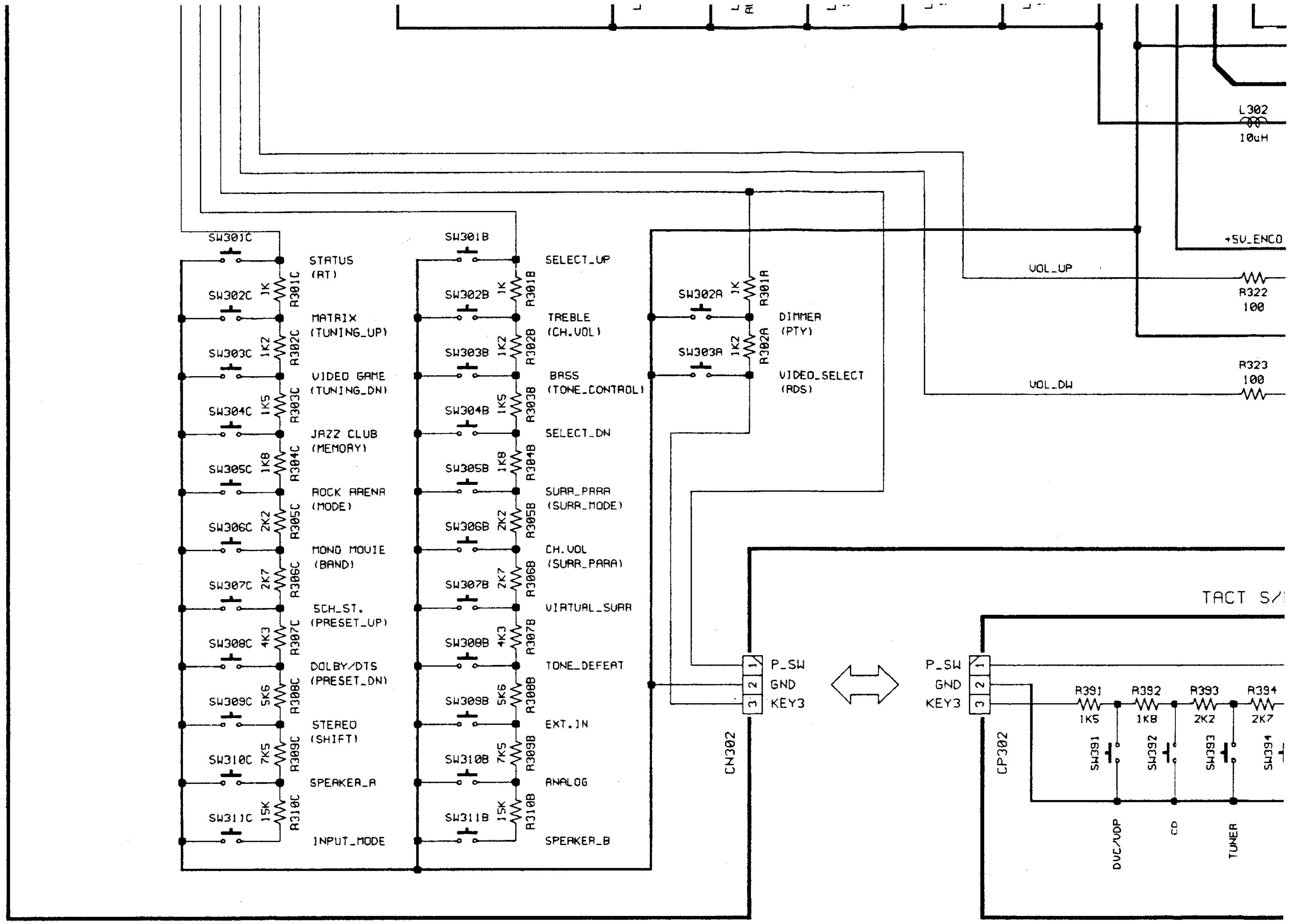
SCHEMATIC DIAGRAMS(6/7)

FRONT P.W.B. UNIT
TACT S/W P.W.B. UNIT
H/P & POWER S/W P.W.B. UNIT

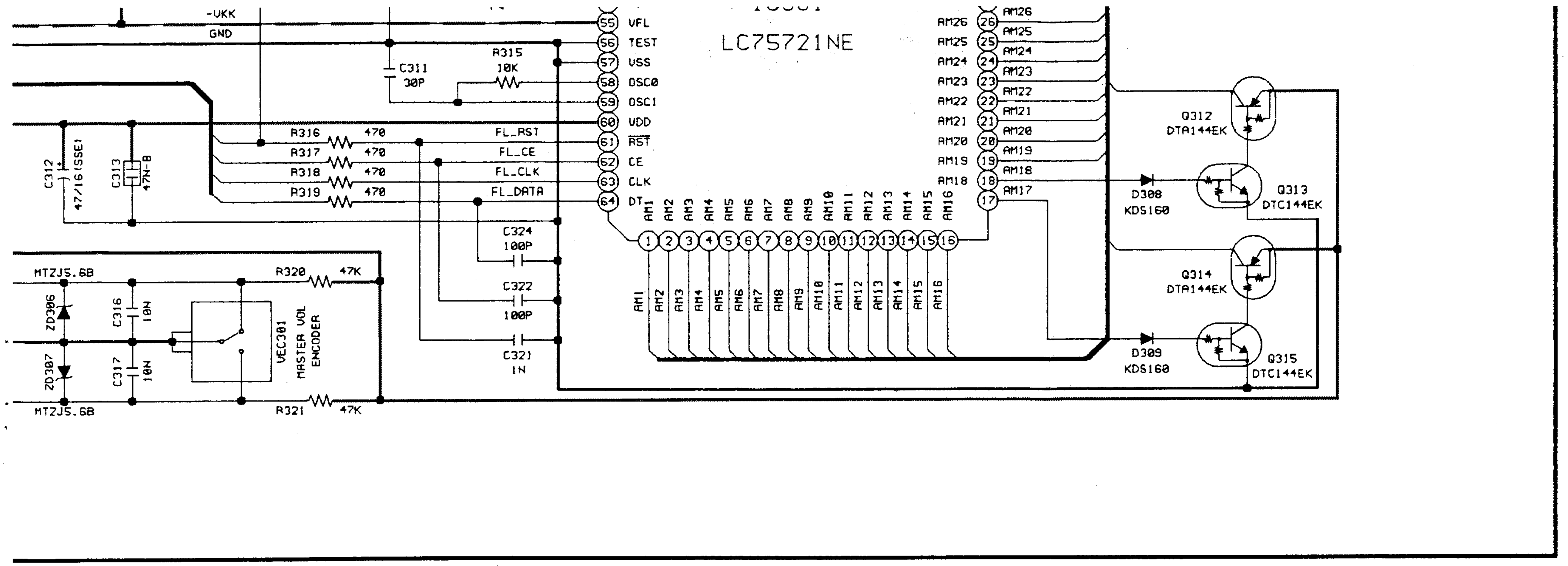
SCHEMATIC DIAGRAMS(6/7)

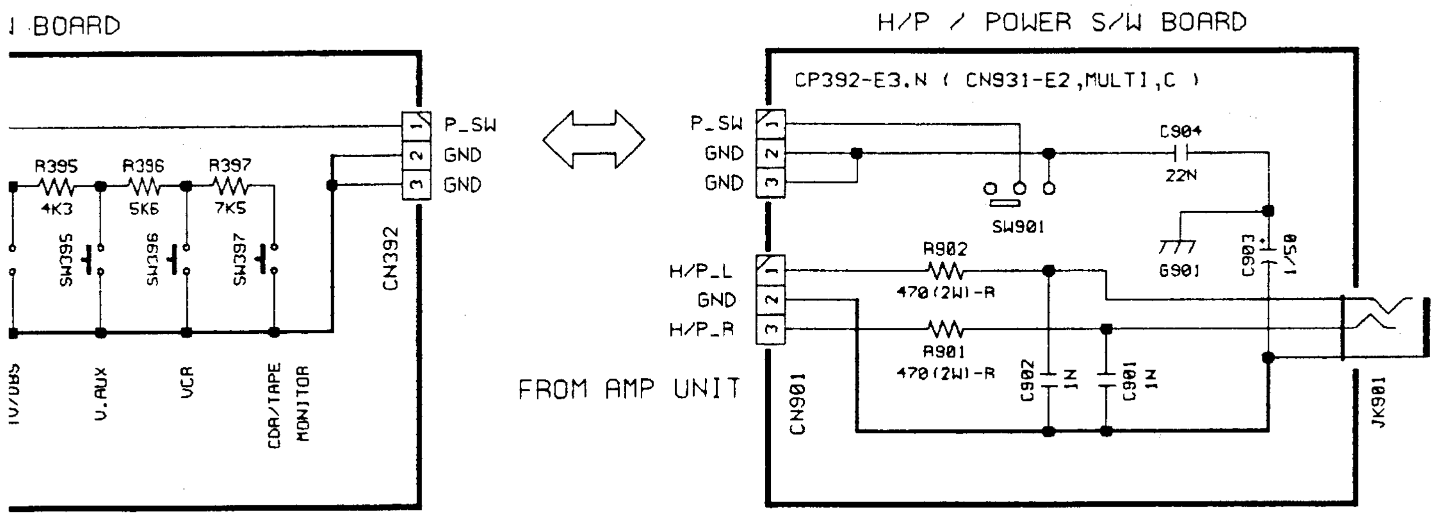

VOL_DW
VOL_UP
KEY_IN1
KEY_IN2
KEY_IN3
VOL_UP
VOL_DOWN
2090_DATA
FL_DRV/2090_CLK
FL_DRV_DATA
FL_DRV_CE
FL_DRV_RST
REMOCON
CPU_GND
CPU_GND
CPU_+5.6V
-VKK
CP301A
TO CPU/VOL UNIT
C305
47/16(SSE)
C304
22N
C333
100P
R314 470
R313 470
2090_DATA
2090_CLK
IC302
BU2090F
AAC
AUTO-IN
ST'BY
SPK_B
SPK_A
DTS
PCM
D.DIGITAL
DIGITAL
C301
10/50
L301
100uH
ZD301
MTZJ6.8B
RMC301
REMOTE
C302
47N
C303
47/10
R311
10
D302
1SS133T
R305 680
LED305
AAC
R306 680
LED306
AUTO-IN
R307 680
LED307
ST'BY
R308 680
LED308
SPK_B
R309 680
LED309
SPK_A
R301 680
LED301
PCM-IN
R302 680
LED302
D.DIGITAL
R303 680
LED303
DTS-IN
R304 680
LED304
DTS-S
D303
1SS133T
D304
1SS133T
1
2
3
4
5


6
7
8
9
10
11
A
B
C
D
FIL1
OPEN
FIL2
FROM TRANS UNIT
CP303
FRONT BOARD
FL301
C306 100N-M
TUNED RDS
STEREO AUTO
REC
MULTI
PHONO VCR
CD
TUNER -1 -2 -3
AUX V_AUX
DVD / MD
VDP / TAPE
-1
TV / DBS
-2
CH
PRO LOGIC
DIGITAL
DIGITAL
ANALOG
AM1 … AM27
AM28 … AM35
AA1 AA2 AA3
G16 … G1
RP01 … RP27
RP28 … RP38
RG01
56K
C307 1/50
C308 47N-M
C309 47N-M
C310 1/50
C391 10N-R
G301
Q310 DTA144EK
Q311 DTC144EK
R332 4K7
D305 KDS160
-UKK
GND
IC301
LC75721NE
G6 G5 G4 G3 G2 G1
VFL
TEST
G7 G8 G9 G10 G11 G12 G13 G14 G15 G16 AA3 AA2 AA1 AM35 AM34 AM33
AM32 AM31 AM30 AM29 AM28 AM27 AM26 AM25


L302
10uH
+5V_ENCO
VOL_UP
R322
100
R323
100
VOL_DW
SW301C
STATUS
(RT)
SW302C
1K
R301C
MATRIX
(TUNING_UP)
SW303C
1K2
R302C
VIDEO GAME
(TUNING_DN)
SW304C
1K5
R303C
JAZZ CLUB
(MEMORY)
SW305C
1K8
R304C
ROCK ARENA
(MODE)
SW306C
2K2
R305C
MONO MOVIE
(BAND)
SW307C
2K7
R306C
5CH_ST.
(PRESET_UP)
SW308C
4K3
R307C
DOLBY/DTS
(PRESET_DN)
SW309C
5K6
R308C
STEREO
(SHIFT)
SW310C
7K5
R309C
SPEAKER_A
SW311C
15K
R310C
INPUT_MODE
SW301B
SELECT_UP
SW302B
1K
R301B
TREBLE
(CH.VOL)
SW303B
1K2
R302B
BASS
(TONE_CONTROL)
SW304B
1K5
R303B
SELECT_DN
SW305B
1K8
R304B
SURR_PARA
(SURR_MODE)
SW306B
2K2
R305B
CH.VOL
(SURR_PARA)
SW307B
2K7
R306B
VIRTUAL_SURR
SW308B
4K3
R307B
TONE_DEFEAT
SW309B
5K6
R308B
EXT.IN
SW310B
7K5
R309B
ANALOG
SW311B
15K
R310B
SPEAKER_B
SW302A
1K
R301A
DIMMER
(PTY)
SW303A
1K2
R302A
VIDEO_SELECT
(RDS)
1
2
3
P_SW
GND
KEY3
CN302
TACT S/
P_SW
GND
KEY3
1
2
3
CP302
R391
1K5
R392
1K8
R393
2K2
R394
2K7
SW391
SW392
SW393
SW394
DVC/VDP
CD
TUNER

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.


LC75721NE
-UKK
GND
C311 30P
R315 10K
R316 470
R317 470
R318 470
R319 470
FL_RST
FL_CE
FL_CLK
FL_DATA
VFL
TEST
VSS
OSC0
OSC1
VDD
RST
CE
CLK
DT
C312 47/16(SSE)
C313 47N-B
C324 100P
C322 100P
C321 1N
MTZJ5.6B
ZD306
ZD307
C316 10N
C317 10N
R320 47K
R321 47K
VEC301 MASTER VOL ENCODER
AM1
AM2
AM3
AM4
AM5
AM6
AM7
AM8
AM9
AM10
AM11
AM12
AM13
AM14
AM15
AM16
AM17
AM18
AM19
AM20
AM21
AM22
AM23
AM24
AM25
AM26
Q312 DTA144EK
Q313 DTC144EK
Q314 DTA144EK
Q315 DTC144EK
D308 KDS160
D309 KDS160


BOARD
H/P / POWER S/W BOARD
CP392-E3.N (CN931-E2,MULTI,C)
R395 4K3
R396 5K6
R397 7K5
SW395
SW396
SW397
V.AUX
VCR
CDR/TAPE MONITOR
CN392
P_SW
GND
GND
SW901
C904 22N
G901
C903 1/50
H/P_L
GND
H/P_R
R902 470(2W)-R
R901 470(2W)-R
C902 1N
C901 1N
CN901
JK901
FROM AMP UNIT
E
F
G
H

——————— + B LINE

— — — — - B LINE

WARNING:

Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power card is less than 460kohms, the unit is defective.

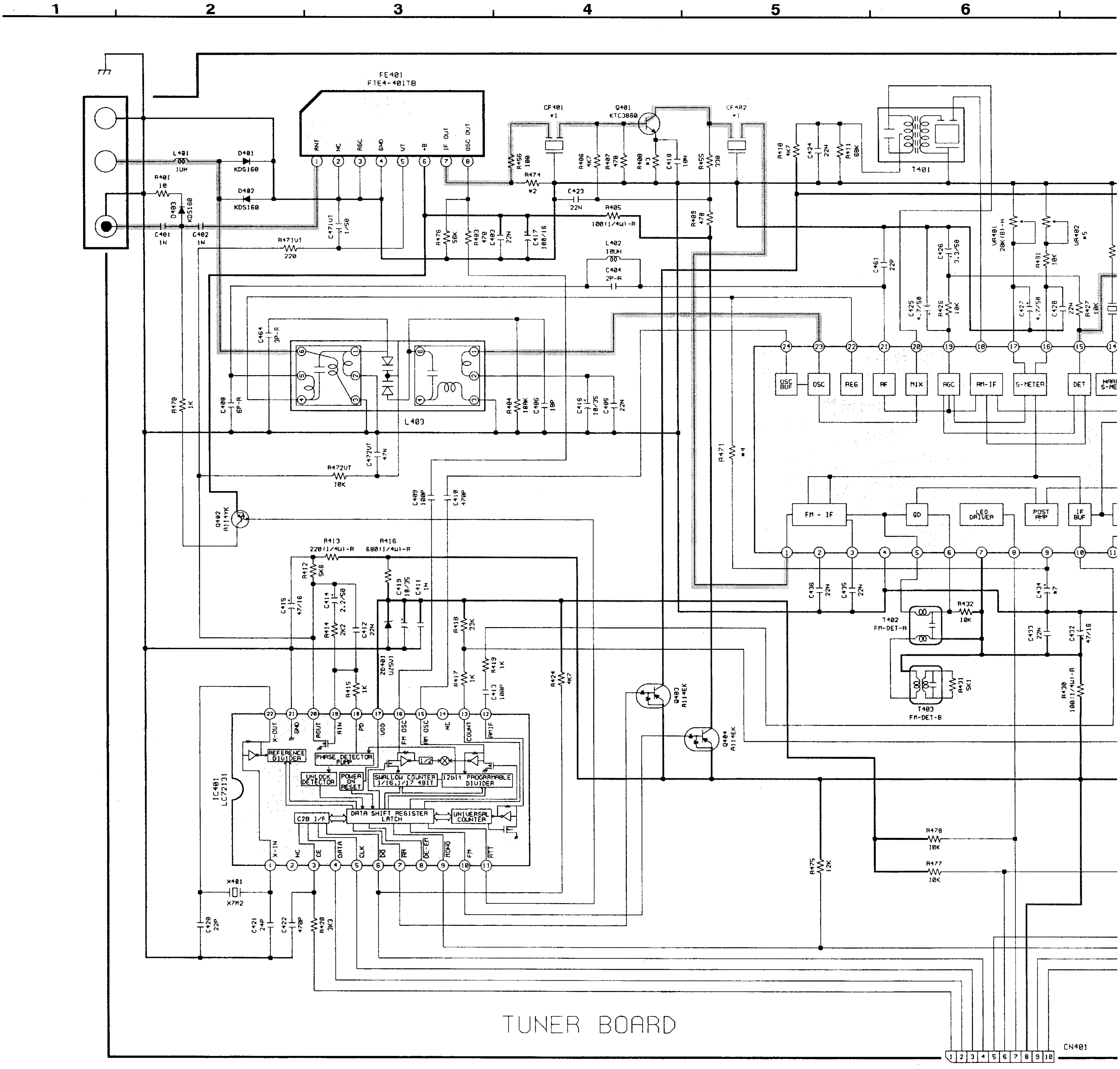
WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

SCHEMATIC DIAGRAMS(6/7)

FRONT P.W.B. UNIT
TACT S/W P.W.B. UNIT
H/P & POWER S/W P.W.B. UNIT

SCHEMATIC DIAGRAMS(7/7)


1
2
3
4
5
6
FE401
FTE4-401TB
ANT
NC
AGC
GND
VT
+B
IF OUT
OSC OUT
CF401
*1
Q401
KTC3880
CF402
*1
T401
L401
1UH
D401
KDS160
D402
KDS160
D403
KDS160
R401
10
C401
1N
C402
1N
R471VT
220
C471VT
1/50
R456
100
R474
*2
C423
22N
R405
100(1/4W)-R
R406
4K7
R407
*3
R408
*3
C418
10N
R455
330
R409
470
R476
56K
R403
470
C403
22N
C417
100/16
L402
10UH
C404
2P-R
R410
4K7
C424
22N
R411
68K
C461
22P
C426
3.3/50
C425
4.7/50
R426
10K
VR401
20K(B)-H
VR402
*5
R431
10K
C427
4.7/50
C428
22N
R427
10K
C464
3P-R
L403
R470
1K
C408
6P-R
R404
100K
C406
18P
C416
10/35
C405
22N
C472VT
47N
R472VT
10K
R471
*4
C409
100P
C410
470P
Q402
A1114YK
R413
220(1/4W)-R
R416
680(1/4W)-R
R412
5K6
C415
47/16
C414
2.2/50
R414
2K2
C412
22N
C419
10/35
C411
1N
ZD401
UZ5V1
R418
33K
R415
1K
R417
1K
R419
1K
C413
100P
R424
4K7
Q403
A1114EK
Q404
A1114EK
OSC BUF
OSC
REG
RF
MIX
AGC
AM-IF
S-METER
DET
FM - IF
QD
LED DRIVER
POST AMP
IF BUF
C436
22N
C435
22N
T402
FM-DET-A
R432
10K
C434
*7
T403
FM-DET-B
R431
5K1
C433
22N
C432
47/16
R430
100(1/4W)-R
IC401
LC72131
X-OUT
GND
AOUT
AIN
PD
VDD
FM OSC
AM OSC
NC
COUNT
AMIF
REFERENCE DIVIDER
PHASE DETECTOR PUMP
UNLOCK DETECTOR
POWER ON RESET
SWALLOW COUNTER 1/16,1/17 4BIT
12bit PROGRAMMABLE DIVIDER
DATA SHIFT REGISTER LATCH
UNIVERSAL COUNTER
C2B I/F
X-IN
NC
CE
DATA
CLK
DO
AM
DE-EM
MONO
FM
ATT
X401
X7M2
C420
22P
C421
24P
C422
470P
R428
3K3
R478
10K
R477
10K
R475
12K
TUNER BOARD
CN401
PLL_CE
PLL_DATA
PLL_CLK
PLL_DI_IN
TU_MUTE
ST
TUNED
+15V
GND
RDS_DET_OUT

	R-NO.	USA(E3)	EUROPE(E2)	MULTI,CHINA
*1	CF401/CF402	SFE10.7MA8	SFE10.7MS3	10.7MA8/MS3
*2	R474	-	180	-
*3	R407/R408	470/1.2K	620/680	620/1.2K
*4	R471	18K	39K	39K
*5	VR402	50KB	100KB	50KB
*6	R428	3.3K	10K	6.8K
*7	C434	1/50	0.33/50	0.33/50
*8	R473	-	2.4K	-

	R-NO.	USA(E3)	EUROPE(E2)	MULTI,CHINA
*9	J442	JUMPER	-	JUMPER
*10	T406	-	ANTI-BIRDIE	-
*11	C462	-	470P	-
*12	R472	-	100	-
*13	Q409	-	KTC3880	-
*14	R449	-	3.9K	-
*15	R450	-	1K	-
*16	R438,R439	100K	150K	100K

*17
*18
*19
*20
*21
*22
*23
*24

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

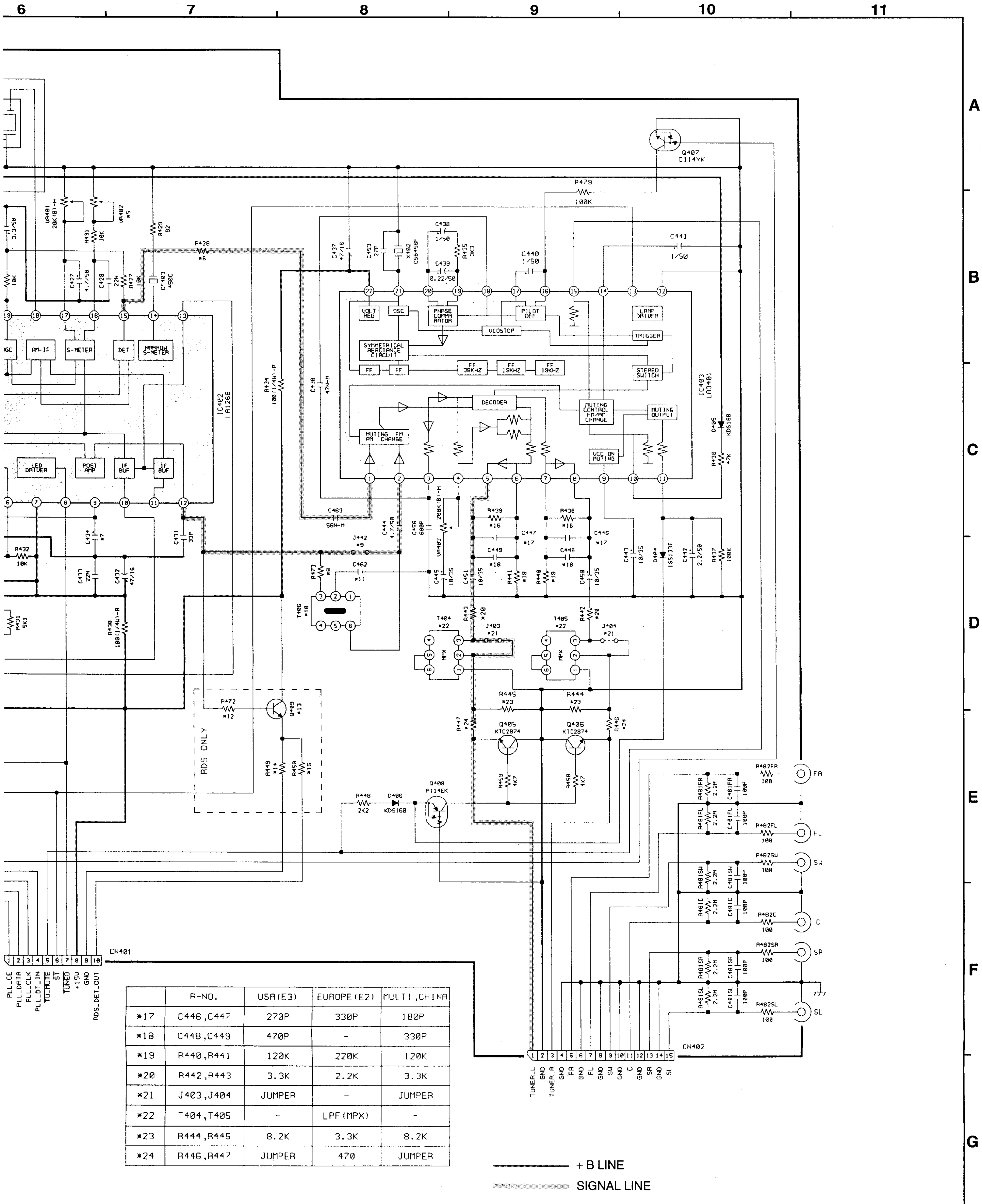
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

CAUTION:

Before returning the unit to the customer, make sure you make either (1 leakage current check or (2) a line to chassis resistance check. If the le current exceeds 0.5 milliamps, or if the resistance from chassis to eithe of the power card is less than 460kohms, the unit is defective.

WARNING:

DO NOT return the unit to the customer until the problem is located anc corrected.


6
7
8
9
10
11
A
B
C
D
E
F
G
H
Q407
C114YK
R479
100K
C441
1/50
C440
1/50
C438
1/50
C439
0.22/50
X402
CSB456F
R435
3K3
C437
47/16
C453
27P
VR401
20K(B)-H
VR402
*5
R431
10K
R429
82
R428
*6
C427
4.7/50
C428
22N
R427
10K
CF403
450C
VOLT REG
OSC
PHASE COMPA RATOR
PILOT DET
LAMP DRIVER
VCOSTOP
TRIGGER
SYMMETRICAL REACTANCE CIRCUIT
FF
FF 38KHZ
FF 19KHZ
FF 19KHZ
STEREO SWITCH
DECODER
MUTING CONTROL FM/AM CHANGE
MUTING OUTPUT
MUTING FM AM CHANGE
VCC ON MUTING
IC403
LA3401
IC402
LA1266
R434
100(1/4W)-R
C430
47N-M
AM-IF
S-METER
DET
NARROW S-METER
LED DRIVER
POST AMP
IF BUF
IF BUF
D405
KDS160
R436
47K
C463
56N-M
C444
4.7/50
C456
680P
VR403
200K(B)-H
R439
*16
R438
*16
C447
*17
C446
*17
C449
*18
C448
*18
C445
10/35
C451
10/35
R441
*19
R440
*19
C450
10/35
C443
10/35
D404
1SS133T
C442
2.2/50
R437
100K
C434
*7
C431
33P
J442
*9
C462
*11
R473
*8
T406
*10
R432
10K
C433
22N
C432
47/16
R431
5K1
R430
100(1/4W)-R
T404
*22
T405
*22
MPX
R443
*20
R442
*20
J403
*21
J404
*21
R472
*12
Q409
*13
RDS ONLY
R449
*14
R450
*15
R445
*23
R444
*23
R447
*24
R446
*24
Q405
KTC2874
Q406
KTC2874
R453
4K7
R458
4K7
Q408
A114EK
R448
2K2
D406
KDS160
R482FR
100
R481FR
2.2M
C481FR
100P
FR
R481FL
2.2M
C481FL
100P
R482FL
100
FL
R482SW
100
R481SW
2.2M
C481SW
100P
SW
R481C
2.2M
C481C
100P
R482C
100
C
R482SR
100
R481SR
2.2M
C481SR
100P
SR
R481SL
2.2M
C481SL
100P
R482SL
100
SL
CN401
PLL_CE
PLL_DATA
PLL_CLK
PLL_DT_IN
TU_MUTE
ST
TUNED
+15V
GND
RDS_DET_OUT
CN402
TUNER_L
GND
TUNER_R
GND
FR
GND
FL
GND
SW
GND
C
GND
SR
GND
SL
+ B LINE
SIGNAL LINE

	R-NO.	USA(E3)	EUROPE(E2)	MULTI,CHINA
*17	C446,C447	270P	330P	180P
*18	C448,C449	470P	-	330P
*19	R440,R441	120K	220K	120K
*20	R442,R443	3.3K	2.2K	3.3K
*21	J403,J404	JUMPER	-	JUMPER
*22	T404,T405	-	LPF(MPX)	-
*23	R444,R445	8.2K	3.3K	8.2K
*24	R446,R447	JUMPER	470	JUMPER

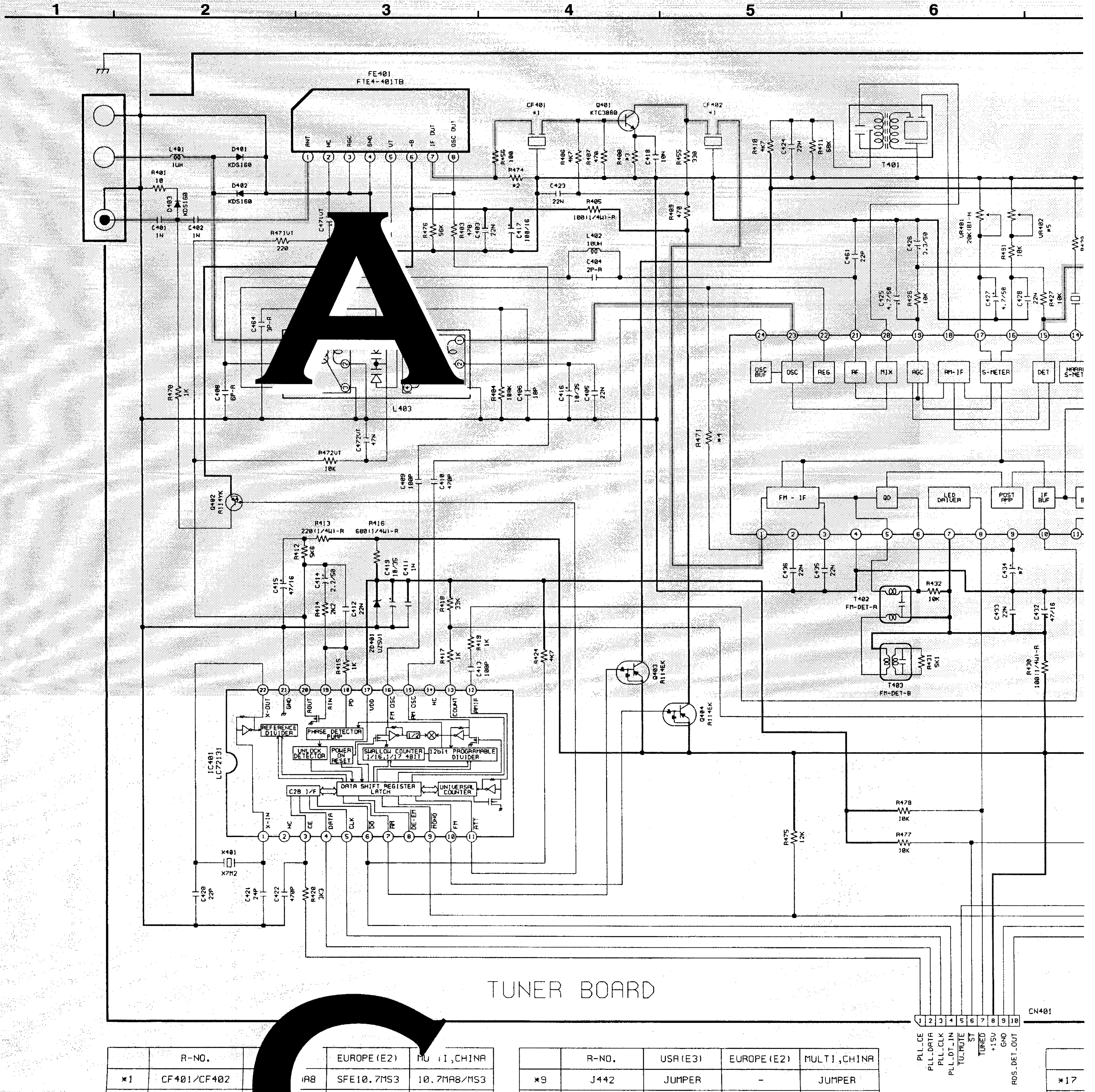
▨ have critical characteristics.
nmended by the manufacture.

tomer, make sure you make either (1) a
to chassis resistance check. If the leakage
the resistance from chassis to either side
ohms, the unit is defective.

omer until the problem is located and

SCHEMATIC DIAGRAMS(7/7)
TUNER P.W.B. UNIT

SCHEMATIC DIAGRAMS(7/7)


1
2
3
4
5
6
FE401
FTE4-401TB
ANT
NC
AGC
GND
VT
+B
IF OUT
OSC OUT
L401 1UH
D401 KDS160
D402 KDS160
D403 KDS160
R401 10
C401 1N
C402 1N
R471UT 220
C471UT
CF401 *1
Q401 KTC3880
CF402 *1
R456 100
R474 *2
R406 4K7
R407 470
R408 *3
C418 10N
R455 330
R410 4K7
C424 22N
R411 68K
T401
C423 22N
R405 100(1/4W)-R
R409 470
R476 56K
R403 470
C403 22N
C417 100/16
L402 10UH
C404 2P-R
C461 22P
C426 3.3/50
C425 4.7/50
R426 10K
VR401 20K(B)-H
R491 10K
VR402 *5
C427 4.7/50
C428 22N
R427 10K
C464 3P-R
R470 1K
C408 6P-R
L403
R404 100K
C406 18P
C416 10/35
C405 22N
OSC BUF
OSC
REG
RF
MIX
AGC
AM-IF
S-METER
DET
R471 *4
R472UT 10K
C472UT 47N
C409 100P
C410 470P
Q402 A114YK
FM - IF
QD
LED DRIVER
POST AMP
IF BUF
R413 220(1/4W)-R
R416 680(1/4W)-R
R412 5K6
C415 47/16
C414 2.2/50
C419 10/35
C411 1N
R414 2K2
C412 22N
ZD401 UZ5V1
R418 33K
R415 1K
R417 1K
R419 1K
C413 10P
R424 4K7
Q403 A114EK
Q404 A114EK
C436 22N
C435 22N
C434 *7
T402 FM-DET-A
R432 10K
C433 22N
C432 47/16
T403 FM-DET-B
R431 5K1
R430 100(1/4W)-R
IC401 LC72131
X-OUT
GND
AOUT
AIN
PD
VDD
FM OSC
AM OSC
NC
COUNT
AMIF
REFERENCE DIVIDER
PHASE DETECTOR PUMP
UNLOCK DETECTOR
POWER ON RESET
SWALLOW COUNTER 1/16,1/17 4BIT
12bit PROGRAMMABLE DIVIDER
C2B I/F
DATA SHIFT REGISTER LATCH
UNIVERSAL COUNTER
X-IN
NC
CE
DATA
CLK
DO
AM
DE-EM
MONO
FM
ATT
X401 X7M2
C420 22P
C421 24P
C422 470P
R420 3K3
R478 10K
R477 10K
R475 12K
TUNER BOARD
CN401
PLL_CE
PLL_DATA
PLL_CLK
PLL_DT_IN
TU_MUTE
ST
TUNED
+15V
GND
RDS_DET_OUT

	R-NO.	[illegible]	EUROPE(E2)	MU I,CHINA
*1	CF401/CF402	[illegible]A8	SFE10.7MS3	10.7MA8/MS3
*2	R474	[illegible]	180	-
*3	R407/R408	[illegible]	620/680	[illegible]20/1.2K
*4	R471	[illegible]	39K	[illegible]9K
*5	VR402	50KB	[illegible]	50KB
*6	R428	3.3K	10K	6.8K
*7	C434	1/50	0.33/50	0.33/50
*8	R473	-	2.4K	-

	R-NO.	USA(E3)	EUROPE(E2)	MULTI,CHINA
*9	J442	JUMPER	-	JUMPER
*10	T406	-	ANTI-BIRDIE	-
*11	C462	-	470P	-
*12	R472	-	100	-
*13	Q409	-	KTC3880	-
*14	R449	-	3.9K	-
*15	R450	-	1K	-
*16	R438,R439	100K	150K	100K

*17
*18
*19
*20
*21
*22
*23
*24

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASUERD AT MO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

WARNING:

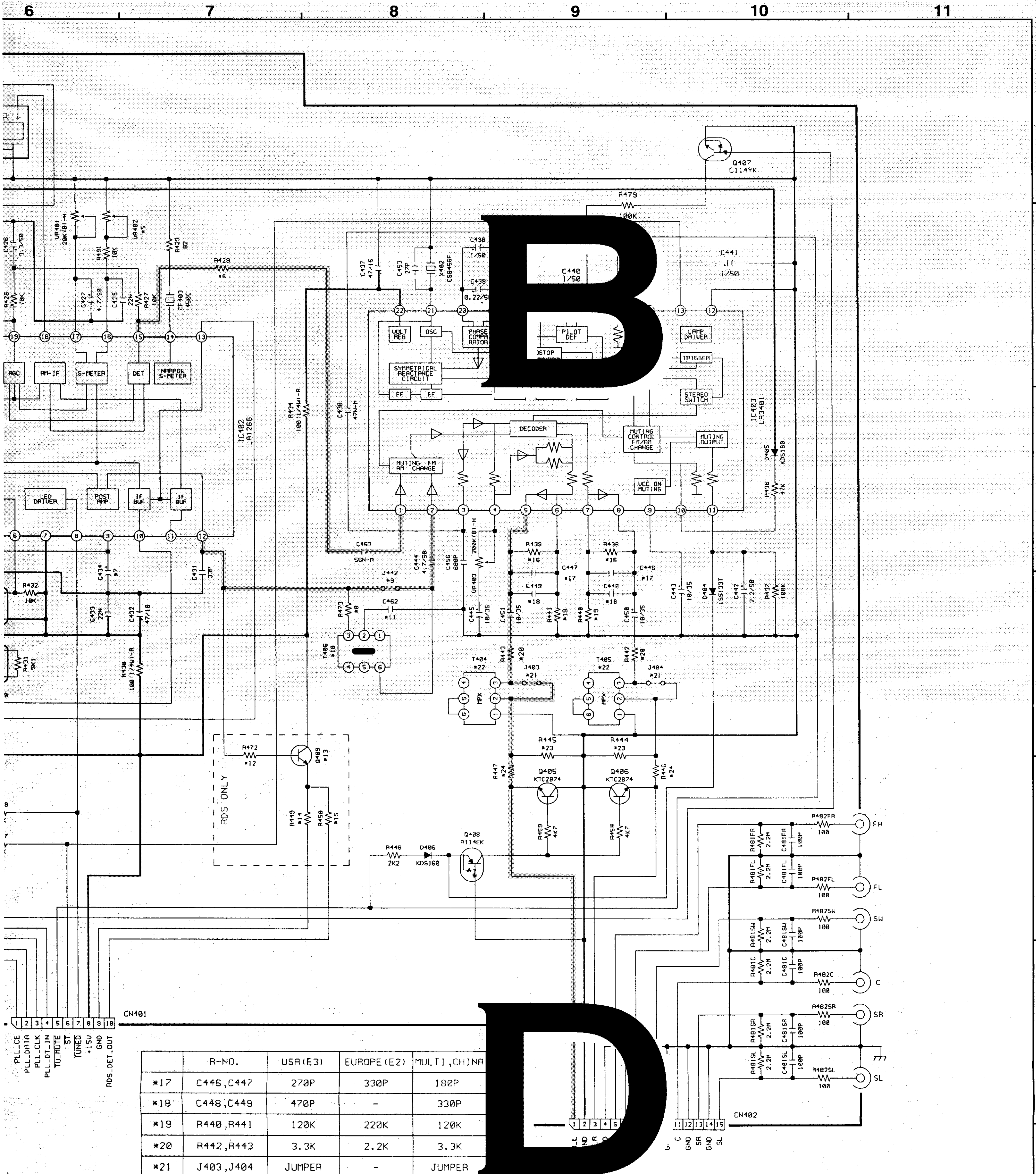
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacture.

CAUTION:

Before returning the unit to the customer, make sure you make either (1) leakage current check or (2) a line to chassis resistance check. If the lea current exceeds 0.5 milliamps, or if the resistance from chassis to either of the power card is less than 460kohms, the unit is defective.

WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.


6
7
8
9
10
11
A
B
C
D
E
F
Q407
C114YK
R479
100K
C441
1/50
C440
1/50
C438
1/50
C439
0.22/50
C437
47/16
C453
27P
X402
CSB456F
R428
*6
VR401
20K(B)-H
VR402
*5
R491
10K
R429
82
C426
3.3/50
R426
10K
C427
4.7/50
C428
22μ
R427
10K
CF403
450C
AGC
AM-IF
S-METER
DET
NARROW S-METER
IC402
LA1266
LED DRIVER
POST AMP
IF BUF
IF BUF
VOLT REG
OSC
PHASE COMPARATOR
PILOT DET
LAMP DRIVER
TRIGGER
STEREO SWITCH
SYMMETRICAL REACTANCE CIRCUIT
FF
FF
IC403
LA3401
DECODER
MUTING CONTROL FM/AM CHANGE
MUTING OUTPUT
MUTING FM AM CHANGE
VCC ON MUTING
D405
KDS160
R436
47K
R431
100(1/4W)-R
C430
47μ-M
C463
5GN-M
J442
*9
C444
4.7/50
C456
680P
VR403
20K(B)-H
C462
*11
R473
*8
T406
*10
C431
33P
C434
*7
R432
10K
C433
22μ
C432
47/16
R430
100(1/4W)-R
R431
5K1
R439
*16
R438
*16
C447
*17
C446
*17
C449
*18
C448
*18
C445
10/35
C451
10/35
R441
*19
R440
*19
C450
10/35
C443
10/35
D404
1SS133T
C442
2.2/50
R437
100K
T404
*22
T405
*22
R443
*20
R442
*20
J403
*21
J404
*21
MPX
R445
*23
R444
*23
R447
*24
R446
*24
Q405
KTC2874
Q406
KTC2874
R459
4K7
R458
4K7
RDS ONLY
R472
*12
Q409
*13
R449
*14
R450
*15
R448
2K2
D406
KDS160
Q408
A114EK
R482FR
100
FR
R481FR
2.2M
C481FR
100P
R481FL
2.2M
C481FL
100P
R482FL
100
FL
R482SW
100
SW
R481SW
2.2M
C481SW
100P
R481C
2.2M
C481C
100P
R482C
100
C
R482SR
100
SR
R481SR
2.2M
C481SR
100P
R481SL
2.2M
C481SL
100P
R482SL
100
SL
CN401
PLL.CE
PLL.DATA
PLL.CLK
PLL.DT.IN
TU.MUTE
ST
TUNED
+15V
GND
RDS.DET.OUT
CN402
C
GND
SR
GND
SL
B
D

	R-NO.	USA(E3)	EUROPE(E2)	MULTI,CHINA
*17	C446,C447	270P	330P	180P
*18	C448,C449	470P	-	330P
*19	R440,R441	120K	220K	120K
*20	R442,R443	3.3K	2.2K	3.3K
*21	J403,J404	JUMPER	-	JUMPER
*22	T404,T405	-	LPF(MPX)	-
*23	R444,R445	8.2K	3.3K	8.2K
*24	R446,R447	JUMPER	470	JUMPER

— + B LINE

▒ SIGNAL LINE

▭ have critical characteristics.
ommended by the manufacture.

istomer, make sure you make either (1) a
e to chassis resistance check. If the leakage
if the resistance from chassis to either side
)kohms, the unit is defective.

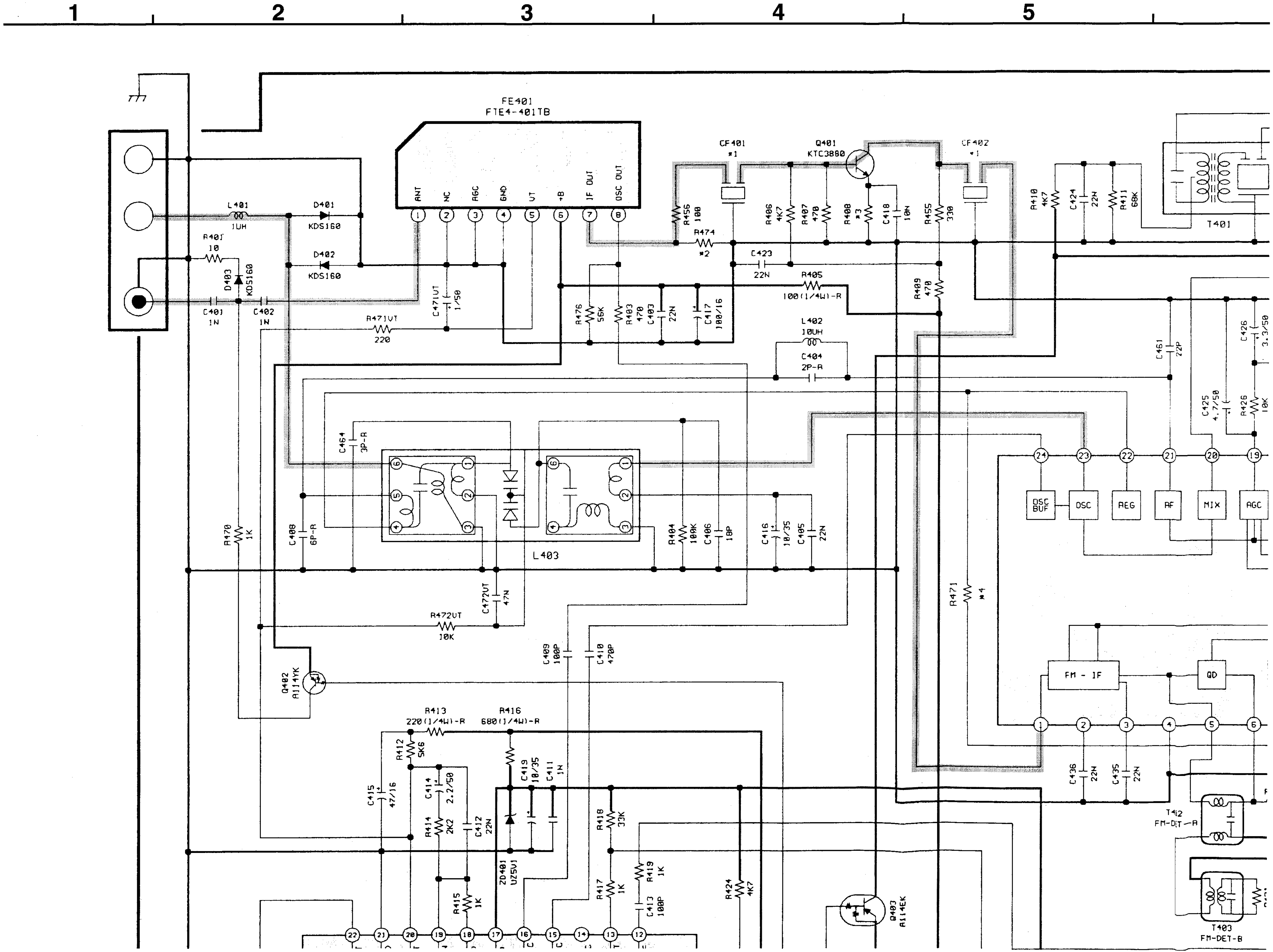
stomer until the problem is located and

SCHEMATIC DIAGRAMS(7/7)
TUNER P.W.B. UNIT

H

G

SCHEMATIC DIAGRAMS(7/7)


1
2
3
4
5
FE401
FTE4-401TB
ANT
NC
AGC
GND
VT
+B
IF OUT
OSC OUT
L401
1UH
D401
KDS160
D402
KDS160
R401
10
D403
KDS160
C401
1N
C402
1N
R471VT
220
C471VT
1/50
R476
56K
R403
470
C403
22N
C417
100/16
CF401
*1
Q401
KTC3880
CF402
*1
R456
100
R474
*2
R406
4K7
R407
470
R408
*3
C418
10N
R455
330
C423
22N
R405
100(1/4W)-R
R409
470
L402
10UH
C404
2P-R
R410
4K7
C424
22N
R411
68K
T401
C461
22P
C425
4.7/50
R426
10K
C426
3.3/50
C464
3P-R
C408
6P-R
R470
1K
L403
R404
100K
C406
10P
C416
10/35
C405
22N
C472VT
47N
R472VT
10K
R471
*4
C409
100P
C410
470P
Q402
A114YK
R413
220(1/4W)-R
R416
680(1/4W)-R
R412
5K6
C419
10/35
C411
1N
C415
47/16
C414
2.2/50
R414
2K2
C412
22N
ZD401
UZ5V1
R418
33K
R417
1K
R419
1K
C413
100P
R415
1K
R424
4K7
Q403
A114EK
24
23
22
21
20
19
OSC BUF
OSC
REG
RF
MIX
AGC
FM - IF
QD
1
2
3
4
5
6
C436
22N
C435
22N
T412
FM-DET-A
T403
FM-DET-B
22
21
20
19
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17
16
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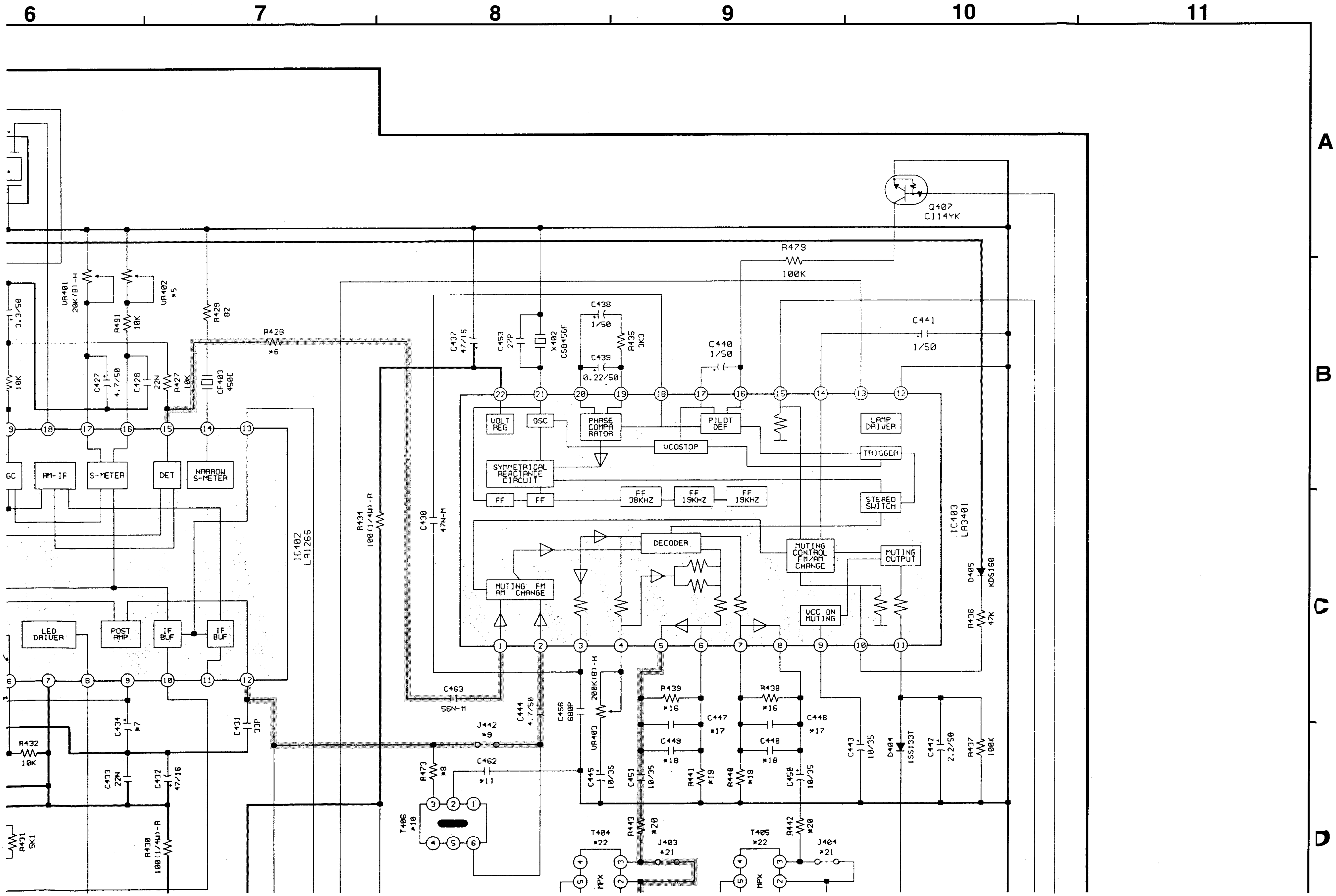
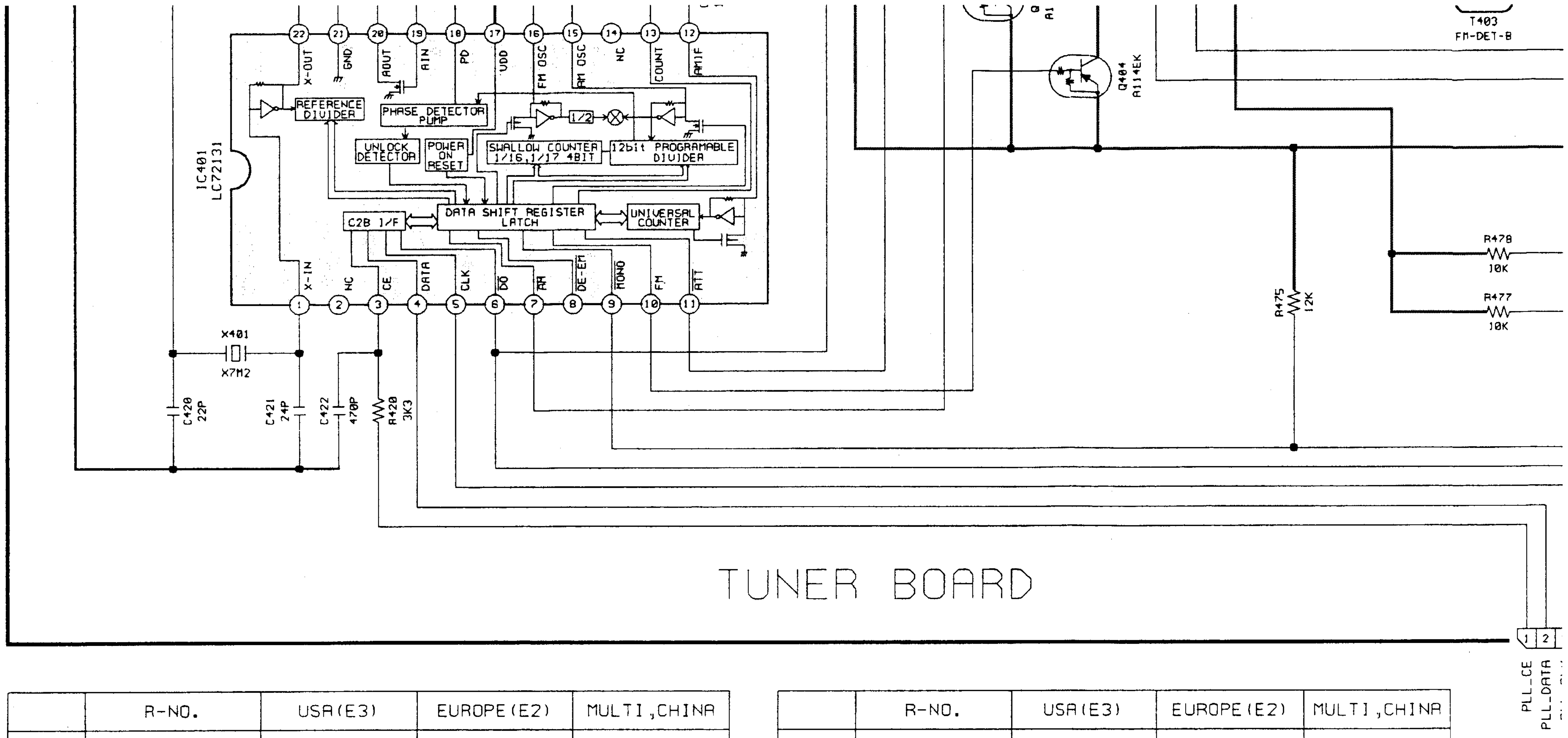
14
13
12


6
7
8
9
10
11
A
B
C
D
Q407
C114YK
R479
100K
C441
1/50
C438
1/50
R435
3K3
C439
0.22/50
C440
1/50
C453
27P
X402
CSB456F
C437
47/16
VR401
20K(B)-H
VR402
*5
R491
10K
R429
82
R428
*6
3.3/50
10K
C427
4.7/50
C428
22N
R427
10K
CF403
450C
VOLT REG
OSC
PHASE COMPA RATOR
PILOT DET
LAMP DRIVER
VCOSTOP
TRIGGER
SYMMETRICAL REACTANCE CIRCUIT
FF
FF
FF 38KHZ
FF 19KHZ
FF 19KHZ
STEREO SWITCH
DECODER
MUTING CONTROL FM/AM CHANGE
MUTING OUTPUT
MUTING FM AM CHANGE
VCC ON MUTING
IC403
LA3401
D405
KDS160
R436
47K
GC
AM-IF
S-METER
DET
NARROW S-METER
IC402
LA1266
R434
100(1/4W)-R
C430
47N-M
LED DRIVER
POST AMP
IF BUF
IF BUF
C463
56N-M
C444
4.7/50
C456
680P
200K(B)-H
VR403
J442
*9
C434
*7
C431
33P
R432
10K
C433
22N
C432
47/16
R473
*8
C462
*11
T406
*10
R431
5K1
R430
100(1/4W)-R
R439
*16
R438
*16
C447
*17
C446
*17
C449
*18
C448
*18
C445
10/35
C451
10/35
R441
*19
R440
*19
C450
10/35
C443
10/35
D404
1SS133T
C442
2.2/50
R437
100K
T404
*22
R443
*20
J403
*21
T405
*22
R442
*20
J404
*21
MPX
MPX


IC401
LC72131
X-OUT
GND
AOUT
AIN
PD
VDD
FM OSC
AM OSC
NC
COUNT
AMIF
REFERENCE DIVIDER
PHASE DETECTOR PUMP
UNLOCK DETECTOR
POWER ON RESET
SWALLOW COUNTER 1/16,1/17 4BIT
12bit PROGRAMABLE DIVIDER
1/2
C2B I/F
DATA SHIFT REGISTER LATCH
UNIVERSAL COUNTER
X-IN
NC
CE
DATA
CLK
DO
AM
DE-EM
MONO
FM
ATT
X401
X7M2
C420
22P
C421
24P
C422
470P
R420
3K3
Q404
A114EK
T403
FM-DET-B
R478
10K
R477
10K
R475
12K
TUNER BOARD
PLL_CE
PLL_DATA

	R-NO.	USA(E3)	EUROPE(E2)	MULTI,CHINA
*1	CF401/CF402	SFE10.7MA8	SFE10.7MS3	10.7MA8/MS3
*2	R474	-	180	-
*3	R407/R408	470/1.2K	620/680	620/1.2K
*4	R471	18K	39K	39K
*5	VR402	50KB	100KB	50KB
*6	R428	3.3K	10K	6.8K
*7	C434	1/50	0.33/50	0.33/50
*8	R473	-	2.4K	-

	R-NO.	USA(E3)	EUROPE(E2)	MULTI,CHINA
*9	J442	JUMPER	-	JUMPER
*10	T406	-	ANTI-BIRDIE	-
*11	C462	-	470P	-
*12	R472	-	100	-
*13	Q409	-	KTC3880	-
*14	R449	-	3.9K	-
*15	R450	-	1K	-
*16	R438,R439	100K	150K	100K

NOTICE

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
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leakage current check or (2) a line to cha
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of the power card is less than 460kohms

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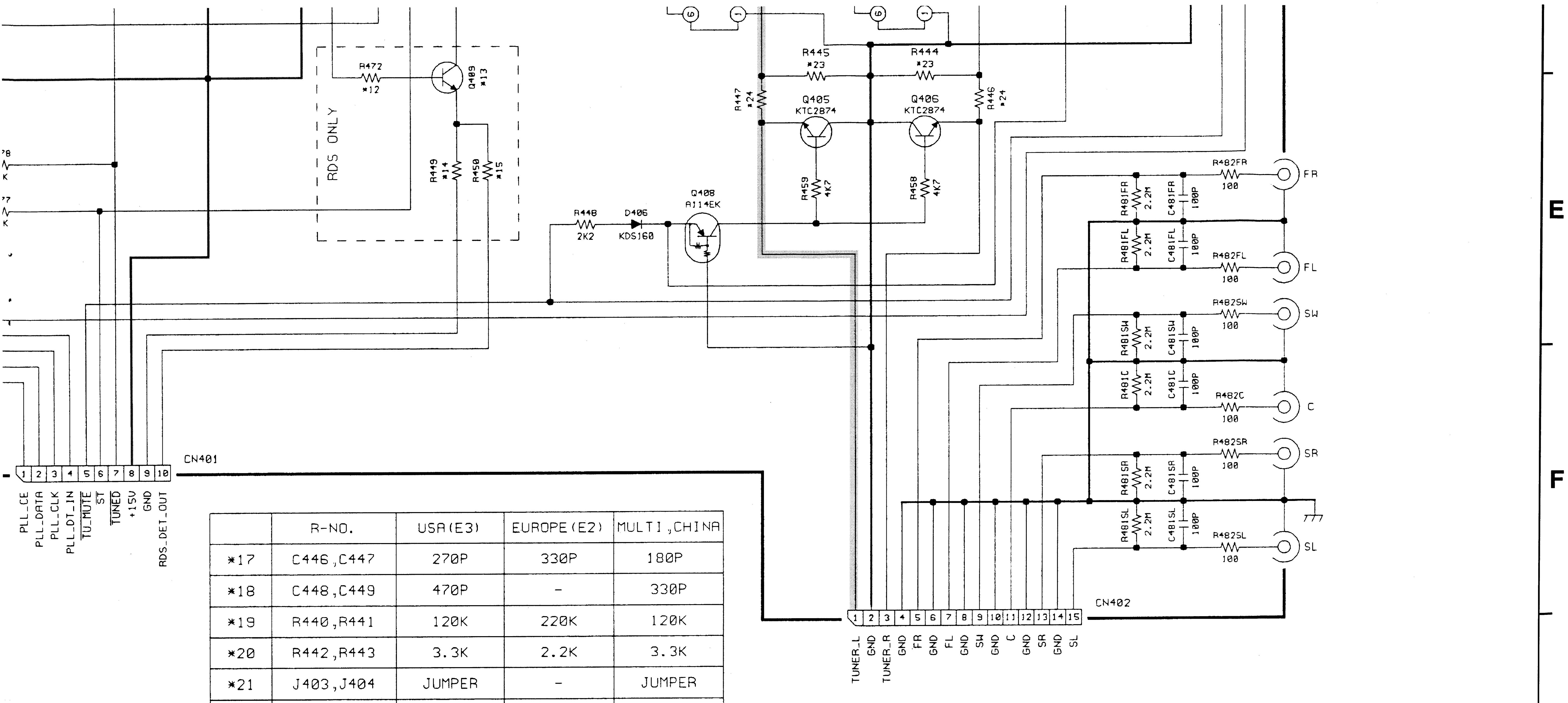
corrected.


R472
*12
Q409
*13
RDS ONLY
R449
*14
R450
*15
R448
2K2
D406
KDS160
Q408
A114EK
R445
*23
R444
*23
R447
*24
R446
*24
Q405
KTC2874
Q406
KTC2874
R459
4K7
R458
4K7
R482FR
100
FR
R481FR
2.2M
C481FR
100P
R481FL
2.2M
C481FL
100P
R482FL
100
FL
R482SW
100
SW
R481SW
2.2M
C481SW
100P
R481C
2.2M
C481C
100P
R482C
100
C
R482SR
100
SR
R481SR
2.2M
C481SR
100P
R481SL
2.2M
C481SL
100P
R482SL
100
SL
CN401
1 2 3 4 5 6 7 8 9 10
PLL_CE
PLL_DATA
PLL_CLK
PLL_DT_IN
TU_MUTE
ST
TUNED
+15V
GND
RDS_DET_OUT
CN402
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
TUNER_L
GND
TUNER_R
GND
FR
GND
FL
GND
SW
GND
C
GND
SR
GND
SL
E
F
G
H

	R-NO.	USA(E3)	EUROPE(E2)	MULTI,CHINA
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*21	J403,J404	JUMPER	-	JUMPER
*22	T404,T405	-	LPF(MPX)	-
*23	R444,R445	8.2K	3.3K	8.2K
*24	R446,R447	JUMPER	470	JUMPER

——— + B LINE

▨ SIGNAL LINE

▨ have critical characteristics.
ommended by the manufacture.

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e to chassis resistance check. If the leakage
if the resistance from chassis to either side
)kohms, the unit is defective.

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SCHEMATIC DIAGRAMS(7/7)
TUNER P.W.B. UNIT